Department of Industrial Engineering and Management

China as an opportunity and a challenge for Western service providers

Sen Bao

Aalto University

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Abstract

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Abstract

Services represent a large and growing share of the global economy, and the internationalization of services is increasingly important in the globalization process of production, distribution and innovation. Business activities between the West and the East are a crucial part of this process. China, as a huge emerging market, attracts more and more Western service providers. This dissertation examines specificities and new phenomena of business-to-business (B2B) services in China. It investigates the opportunities and challenges that Western service providers meet in this country, characterized by a mix of Confucian culture and centralized socio-political system.

The dissertation explores both specific sectors and topical issues. Regarding the former, it focuses on industrial services and knowledge-intensive business services (KIBS). Regarding the latter, it analyzes the development of creative industries and sustainability efforts in China. The interaction between the West and the East is studied in the light of experience of Nordic companies conducting business in China or entering this market. Qualitative case studies have been used to gain understanding on service business in China. Five manufacturing and three KIBS companies from Finland and Sweden participated in the study. Primary data were mainly collected via the interviews of service providers, their partners and customers, and experts. Governmental and company documents have been used as supplementary data. The theoretical reviews include topical phenomena of the service economy, internationalization of services and cultural differences.

The results indicate that the emphasis on human relationships ("guanxi") as a central element of the Chinese culture still impacts on customer behavior, even though there is a variety according to regions and the ownership of companies. Service culture in a tacit form is involved in the philosophical heritage, but services as offerings are gaining ground only gradually. The appreciation of tangibles over pure services has been a traditional phenomenon. In industrial services, spare parts and integrated product-service solutions are popular because tangible elements are delivered. In the KIBS business, there are multiple roles for the Western service providers: a KIBS company can act as an integrator, a concept developer, or a multi-stage actor in the value chain. Creative industries are growing rapidly in China and provide business possibilities for Western companies – a case example in this research is 3D solutions for digital media. Also the Chinese sustainability policy is an opportunity: the participation of Western technological KIBS in the huge eco-city projects illustrates it.

Keywords internationalization of services, cultural differences, service economy in China, industrial services, KIBS, creative industries, sustainability

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Preface and acknowledgements

The starting point for this dissertation can be traced back to my study of the Master's Program on Service Management and Engineering at Aalto University five years ago. This program opened me the door to study services systematically. I found a more specific topic in bridging the understanding of service business between the West and the East. As a native Chinese, studying and working abroad for several years, I have experienced the significance of cultural differences myself and perceived their influence on the daily life and business practices.

Many people have supported me during the work. Most importantly, my instructor Marja Toivonen has helped me to outline the framework of my dissertation and to go deeper in the specific topics that I wanted to focus on: the development of the Chinese service economy and its implications to Western providers working in China. I owe Marja a debt of gratitude for the patient guidance, encouragement and advice that she has provided during my doctoral process. I feel so lucky to have had an instructor who has genuinely cared about my research work and answered my concerns promptly. Thank you, Marja, for all the time and effort that you have given me throughout my study.

I am deeply grateful to my supervisor Eila Järvenpää, for her continuous help and support during these years. She has offered me valuable suggestions to deepen the intercultural context of the dissertation and to make it an integrated whole. I appreciate her flexibility when I sought my way to link together the fascinating topics – she provided important advice in creating the storyline.

I am very grateful to my dissertation pre-examiners Patrik Ström and Mika Kautonen, and to my opponent Brita Hermelin. Thank you for the profound assessment of my dissertation, and for the valuable and suggestive comments regarding it. These comments inspire me in my future work.

My research has been carried out mainly in two projects with a China focus at VTT Technical Research Centre of Finland. The projects have been funded by VTT, TEKES (the Finnish Funding Agency for Innovation) and industrial partners. I would like to thank the steering group members of the project consortiums for their support and new challenging questions that have pushed me forward. Particularly, I would like to acknowledge project managers Markku Mikkola and Inka Lappalainen from VTT, and senior advisor Jaana Auramo from TEKES. They have given me both academic and practical advice. My thanks also go to all the interviewees who have shared their insights and experience. This work could not have been completed without your contribution.

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Helsinki, September 2015

Sen Bao

List of publications

This doctoral dissertation consists of a summary and of the following publications.

Article I: Bao, Sen and Toivonen, Marja (2015), Cultural differences in servitization: Nordic manufacturers in China, Journal of Science and Technology Policy Management, Vol. 6 No. 3, pp. 223-245.

Article II: Bao, Sen and Toivonen, Marja (2014), Finnish Knowledge-Intensive Business Services in China: Market entry and position in the value chain, *Technology Innovation Management Review,* Vol. 4 No. 4, pp. 43-52. http://timreview.ca/article/784

Article III: Bao, Sen and Toivonen, Marja (2015), Cultural and creative industries in China, Journal of Inspiration Economy, Vol. 2 No. 2, pp. 11-27.

Article IV: Bao, Sen and Toivonen, Marja (2014), The specificities and practical applications of Chinese eco-cities, Journal of Science and Technology Policy Management, Vol. 5 No. 2, pp. 162-176.

Author’s contributions

Article I: Cultural differences in servitization: Nordic manufacturers in China

The author had the main responsibility for the article: its theoretical framework, empirical results and discussion. He also revised the article based on the feedback of anonymous reviewers in the journal. He presented an earlier version of this article in the XXII International Conference of RESER (European Association for Research on Services) “Services and economic development: local and global challenges”, 20-22 September, 2012, Bucharest, Romania. The paper was awarded with a grant for three best papers of PhD students.

Article II: Finnish Knowledge-Intensive Business Services in China: Market entry and position in the value chain

The author had the main responsibility for collecting and analyzing the empirical material. He also participated in planning and writing the entire article. He presented an earlier version of this article in the XXIII International Conference of RESER (European Association for Research on Services) “Finding growth through service activities in barren times”, 19-21 September 2013, Aix en Provence, France.

Article III: Cultural and creative industries in China

The author had the main responsibility for the theoretical framework and empirical analysis. He presented an earlier version of this article in XXIV International Conference of RESER (European Association for Research on Services) “Services and New Societal Challenges: Innovation for Sustainable Growth and Welfare”, 11-13 September 2014, Helsinki, Finland.

Article IV: The specificities and practical applications of Chinese eco-cities

The author had the main responsibility for the theoretical reasoning (especially the analysis of the original Chinese literature, cf. Appendix 1 A) and for the empirical discussion. He also revised the article based on the feedback of anonymous reviewers in the journal.

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1 Introduction

1.1 Background

Services represent a large and steadily increasing share of the global economy, accounting for almost two-thirds of the world's total output (Javalgi et al., 2007; Knox et al., 2014). In addition to the service sector, manufacturing companies add services into their total offerings in order to develop a close relationship with customers and in this way survive in the tightening competition (Kowalkowski et al, 2011). The growing knowledge-intensity and innovativeness of services constitute an important characteristic of the knowledge economy and can be interpreted as a prominent trend of recent evolution in industrialized countries (Müller and Zenker, 2001).

Services have traditionally been regarded as domestic activity (Roberts, 1998). Today the internationalization of business has extended from the trade of goods to the trade of services: border-crossing takes place – not only in the case of technologies – but also in the case of deeds and performances (Clark and Rajaratnam, 1999; Lovelock et al., 2004). Internationalization of services is regarded as one of the most important phenomena in the process of the globalization of production, distribution and innovation, having implications for the international division of labor and for the competitiveness of firms, regions and countries (Miozzo and Miles, 2003).

The internationalization of services shows some peculiar features that deviate from the ways in which manufacturing companies go global. The central role of collaborative activities with clients favors local presence via subsidiaries, joint ventures, agencies and partnership arrangements (Léo and Philippe, 2011). Correspondingly, exports are mainly possible in the form of concepts or ICT-enabled "presence" (e.g. remote monitoring). Also the process through which service firms move from the home country to international markets includes specificities (O'Farrell et al., 1998). Following a client has been a typical start, and independent internationalization has taken place in a cautious manner from countries of similar culture. "A short psychic distance" has often been interpreted as a short geographical distance (Contractor et al., 2003).

However, in today's globalized world, companies also seek business opportunities far from home and aim to manage cultural differences. These differences concern, among others, the communication style, negotiation practices, decision making and risk taking (cf. Shenkar, 2001; Moran et al., 2014). In communication, the style may be direct or indirect and it may favor formality or emotionalism (cf. Hall, 1976; Levine, 1985). In negotiation practices, the role of consensus is important, while the role of hierarchy is essential in decision making (cf. Hofstede, 1980; Fang, 1999). Risk taking reflects the tolerance of uncertainty and the long-term vs. short-term orientation (cf. Hofstede, 1991).

The “service economy” is a phenomenon that for several decades was recognized in the Western countries only, but nowadays it is more and more prominent in the developing countries, too. This development has brought to the fore the issue of cultural differences in a new context. Big differences have been recognized between the West and the East. The increasing interest of Western companies in trade with China has made this division particularly topical. China, as an emerging economy, offers a huge rapidly growing market with a large population of 1.3 billion, whereas developed markets in Europe and in the US suffer from the maturing of markets in many sectors (Gebauer et al., 2007). Even during and after the financial crisis of 2008, when most Western countries have experienced an economic downturn, the average annual GDP growth in China has been about 8% (China National Statistics Bureau, 2011).

Also services play an important role in the growth of the Chinese economy. During recent years, the output of the service sector has exceeded the output of the industrial sector (agriculture excluded). The sector shows a further growth potential, since its share is still much lower than in the developed countries. In 2013, services comprised 46% of GDP in China, while this share was 79% in the US and 73% in Japan (Bajpai, 2014). It is remarkable that some developing countries, too, have a broader service sector compared to China: in 2013, the GDP share of this sector was 69% in Brazil and 57% in India (Song, 2014). The policies of the Chinese government favor the further development of services. Together with the general modernization of the market structure, this phenomenon can be supposed to lead to the continuation of the positive trend. In addition to the development of the domestic activity, the Chinese service market provides an opportunity for Western companies – both to those that have already entered this market and to those planning the establishment of business activities in China.

1.2 Scope of the dissertation and research gap

Early service research was dominated by the focus on consumer services, but during the last two decades the situation has become more balanced (Johnston, 2005; Brax, 2013). A growing need for research in business-to-business (B2B) services has come out and many scholars have adopted this perspective. Within the B2B context, *industrial services and knowledge-intensive business services (KIBS)* have been the target of interest in particular. Their central role in the economy dynamics is noticed and they are considered to express two important trends – titled as “servitization” and “kibsification” respectively (Vandermerwe and Rada, 1988; Hales, 2001).

Industrial services include services provided by manufacturing companies to other manufacturers. Traditionally, service sectors have been clearly separated from manufacturing sectors. The servitization trend has challenged this separation: manufacturing companies are increasingly augmenting their tangible offerings with intangible services to enhance differentiation and customer value (Vandermerwe and Rada, 1988; Baines et al., 2009). KIBS are specialized services that expert companies provide to other companies and organizations; most KIBS companies are "pure" service providers without material production (Miles et al., 1995). KIBS companies are particularly important as they provide high value-added services. They offer solutions to both technological (engineering and ICT) and managerial (legal, financial, marketing etc.) issues (Miles, 2005). KIBS have been the most rapidly growing sector in Western countries more than thirty years. KIBS companies are also central actors in the globalized structures of innovation: many of them operate internationally and transfer knowledge between global, national and regional levels (Howells and Roberts, 2000). The term "kibsification" refers to the spread of knowledge-intensity to broader contexts: also companies which have earlier focused on routine services (e.g. cleaning or surveillance) provide today expert services (Brax, 2013; Murtonen, 2013).

In China, services were long neglected but are nowadays advancing rapidly, as stated above. This development also concerns industrial services. Both domestic manufacturers who have produced equipment locally, and foreign manufacturers who have exported equipment to China, are now expanding their offerings to services linked to their equipment – so-called installed base services (Neely et al., 2011). The servitization rate of the Chinese manufacturing has grown from 1% in 2007 to almost 20% in 2011 (Neely et al., 2011). Also a qualitative change is taking place: the focus is on the transfer from low price services to value adding offerings (Liu, 2007). As regards KIBS, studies indicate that these services are particularly favored by the governmental policy and currently play a crucial role in the knowledge flows within regional clusters (Shyu et al, 2007). Some coastal regions, such Yangtze River Delta and Pearl River Delta areas, show rapid growth of the KIBS sector (Qi and Guan, 2009).

The rising potential of industrial services and KIBS in China is attracting interest of Western players. However, Western providers cannot simply transfer their service offerings from home countries to China due to considerable cultural differences (Gebauer, 2007). The heritage of Confucianism, a fundamental philosophical thought of moral ethics and human relationships, has dominated the Chinese culture for more than 2000 years (Tu, 1984). During the recent decades, China has also shown distinctive characteristics in its socio-political system (Fang, 2006). The intermingling of this system with cultural specificities influences the ways in which business is conducted: collectivism, hierarchical order and centralized decision making are some important features. At the general level, many scholars have studied the preconditions of business success among Western actors in China, and the implications of cultural and political mix have been confirmed (Davies et al., 1995; Porter, 1996; Fang, 2006). However, evidence is much scarcer on service business. This is the *first research gap* that I aim to study in my dissertation.

In addition, there are new business areas that have aroused interest globally and which China seems to develop rapidly, too. *Creative industries* have attracted attention of an increasing number of researchers and practitioners (Müller et al, 2009). These industries generate and exploit intellectual property based on individual talents in advertising, publishing, etc. (CIMD, 1998). Companies in creative industries have been suggested to facilitate innovation in other sectors and to be active innovators themselves – showing characteristics similar to KIBS (cf. Miles, 1999; Gallouj, 2002). During the past two decades, these industries have also significantly contributed to the economy in terms of employment, regional development and urban dynamics (Andari et al., 2007). Creative activities rely upon innovative ideas, skills and advanced technology in production and consumption (Li, 2008). In China, where firms earlier played the role of world's "workhorse", the emphasis on creativity is a new phenomenon. It is one factor in moving up the value chain towards high value products and services – following the trend of developed economies (Neely et al., 2011). Changing the brand "made in China" to the brand "created in China" is a goal (Keane, 2006). Creative industries also match well with the Chinese policy to build an "innovative nation" (Keane, 2009; NDRC, 2011). The annual growth in creative industries is anticipated to be around 20% and account for 4% of GDP in China in 2015 (NDRC, 2011).

Sustainability is another topic that has become increasingly important both globally and in China. Its role has grown in both research and policy since the 1980s (Brown et al., 1987; Pope et al., 2004). To realize sustainability in the long term, the integration of sound environment, equitable society and well-functioning economy is needed (Diesendorf, 2000). Since the 1990s, the Western world has actively built networks and implemented policies to promote values and practices of sustainable production and consumption (Barber, 2007). Legal, financial and market-related pressures have been put on companies to develop more sustainable products and services (Jørgensen, 2008). In China, the corresponding activities have to be conducted in conditions of midterm industrialization (Ren, 2003). Parallel with the positive consequences of economy boom over the past three decades, China has experienced serious pollution problems. These problems were neglected for a long time. However, in the 12th Five-Year Plan 2011-2015 (NDRC, 2011), sustainability was emphasized as the basis for China's future growth and priorities. The central government intends to invest about 133 billion US dollars to deal with the pollution and to promote a green economy during this period (Liu, 2011). Services are one strategic area in the optimization of industrial structure for sustainable development (NDRC, 2011).

These efforts provide new opportunities for Western companies in China. The customer demand for creative services is huge due to the country's population size (1.3 billion); especially the younger generation is eager to use these services (Li and Yu, 2007). The upsurge in building eco-cities in China since the beginning of the 2000s is an opportunity to Western design and consultancy services (Qiang, 2009). However, challenges cannot be neglected. The unique characteristics of creative industries in China, such as piracy and censorship, may hamper the business of foreign service providers (Montgomery, 2010). Also the concept of sustainability has its own specificities and applications in China, which may confuse Western service providers

(Cheng and Hu, 2010). A particularly important application is the Chinese eco-city concept, which has common elements with the respective Western concepts, but which also reflects the local culture and the current stage of urbanization in China. These opportunities and challenges have not been discussed at a detailed level in earlier studies. Thus, *the second research gap* that I aim to narrow concerns the peculiarities of creative industries and sustainability efforts in China, including implications to the service business by foreign companies.

To summarize, the first research gap can be identified in established service areas (industrial services and KIBS) and concerns the cultural differences that Western providers face when they initiate business in these areas in China. The second research gap can be identified in emerging topics (creative industries and sustainability) and concerns the Chinese peculiarities that Western actors should be aware of when they are involved in local business linked to these topics.

1.3 Research questions and structure of the dissertation

The main research question of this dissertation is: *what are the specificities and new phenomena in B2B service business in China, and what kinds of opportunities and challenges do they provide to Western business actors in the Chinese markets*? The dissertation contributes to the understanding of the mix of the Confucian culture and the socio-political situation as an operational environment for Western service providers. It examines success factors and challenges that the representatives of developed and open economies meet in an economy that is characterized by emerging development and a hierarchical order.

More specifically, the dissertation contributes to the understanding of the development in two types of services that are established in the West and now developing in China, too: industrial services and KIBS. The other contribution concerns new societal and economic issues – creative industries and sustainability; here the respective services are currently in a shape-taking stage in China. Two groups of research questions are posed, each of them including two sub-questions:

1. Research questions related to industrial services and KIBS:
    1.1. What kinds of opportunities and challenges do Western manufacturers face in the Chinese markets of industrial services, in terms of culture and socio-political situation?
    1.2. What kinds of options are available to Western KIBS companies in entering the Chinese markets and in positioning themselves in the value chains?
2. Research questions related to creative industries and sustainability:
    2.1. What kinds of specificities can be identified in the development of creative industries in China and how do these specificities influence Western actors in these industries?
    2.2. What are the core elements of the Chinese eco-city concept and how does it differ from the respective Western concepts and strivings for sustainable development?

The dissertation consists of four articles and of the summary part. Each article concerns primarily one sub-question. However, all of them include analysis of the situational factors in China from the viewpoint of service business development. The emphasis between the description of local specificities and the description of business implications varies. Articles 1 and 2 are more clearly business oriented than articles 3 and 4, which are more focused on the current development in China. This difference is due to the more established nature of the research topics in the first two articles: several earlier studies, both in China and in the West, have described the basic characteristics of industrial services and KIBS and their operational environmental in China. Thus, I have focused on the opportunities and challenges that these two types of services reveal when "the West meets the East". In the latter two articles, the study concerns topics in which general analysis is available from former studies, but the comparison of the Chinese concepts and efforts with the corresponding Western concepts and efforts requires clarification. Both the concept of creative industries and the concept of eco-city have a different content in China and in the West, and the activities initiated in these fields deviate correspondingly. Here, I have been able to analyze the service business of Westerners in a preliminary way only. Table 1 illustrates in more detail how the different articles contribute to the understanding of situational factors in China, on the one hand, and to the implications concerning the Western actors, on the other (weight is marked with the number of "x").

Table 1: Focus of the articles: development in China vs. implications to Western business

	Cultural and socio-political mix and its variations in China	Development of service economy in China	Implications to foreign business in established services	Implications to foreign business in new service topics
Article 1	xxx	xx	xxx	x
Article 2	x	x	xxx	x
Article 3	xx	xxx	x	xx
Article 4	xx	xxx	x	xx

All articles are based on empirical material, which has been acquired via case studies. These studies have mapped the experience of Finnish (and two Swedish) companies. In a strict sense, the cultural issues concern therefore the Nordic and Chinese cultures. The specificities of Nordic culture have been pointed out in the first article, in which they have been found to be most influential. Other articles discuss the difference between the West and the East.

Article 1 examines the development of industrial service business in China and identifies the opportunities and challenges met by Western providers. The article analyzes first central success factors in different types of industrial services and thereafter discusses the central socio-cultural challenges that foreigners meet in China. Article 2 focuses on the market entry strategy and the value chain positioning of Western KIBS companies in China. The forms of foreign presence and the paths to international markets are presented as the theoretical background. The value offering point is examined in the cases of a service integrator, a concept designer and a multi-stage actor. Article 3 investigates the emergence of creative industries as a part of the knowledge economy in China. It points out phenomena – piracy in particular – that may cause problems when foreigners collaborate with local actors in these industries. Article 4 analyzes specificities and applications of the eco-city concept as an expression of sustainability concerns in China. The concept is linked to urbanization and includes the issues of energy, waste management, city planning etc. Similarities and differences with the corresponding Western concepts (especially the digitalization-driven concept of smart city) are recognized.

After this introduction, the summary part of the dissertation proceeds as follows. The second chapter includes the literature review. It defines first the central concepts linked to services and service economy and presents thereafter the central topics that are in the background of the articles: convergence of services and manufacturing, services in knowledge and creative economy, and the role of services in tackling the sustainability challenge. Then the chapter continues to the topic of the internationalization of services: forms of foreign presence and paths to international markets describe the basic opportunities; business models, value chains and networks introduce a more managerial view. The final part of the literature review discusses cultural differences, starting from their general impact on service business, continuing to the dialog between the West and the East, and ending up with the specific context of this dissertation: the Chinese culture from the viewpoint of services. The third chapter introduces the design and methodology of the empirical studies carried out in this dissertation. The main methodology has been case studies; data were collected by interviews and supplemented with document analysis. The fourth chapter summarizes the results of each individual article and reflects them in regard to the research questions. The fifth, final chapter concludes the key results based on the literature review and case studies, and discusses their theoretical contributions and managerial implications. Also the limitations of the research and suggestions for future studies are brought up in the final chapter.

2 Literature review

2.1 Service economy and service business

The concept of service has several meanings. It can be used to refer to a service process, to the outcome of this process or to the benefit (value) linked to the process and its outcome. In the literature, the process and outcome views are usually combined into an analysis of a service as an offering, which actually means that services are understood as immaterial products (Edvardsson and Olsson, 1996). The main difference compared to material products is the central role of the process: a core part of a service is an activity or performance (Grönroos, 1990; Hill, 1977). In material products, the production process is clearly separated from the output and it is the concern of the provider – the customer receives the outcome and evaluates it. In services, however, the customer participates in the production process and evaluates both the process quality and outcome quality (Grönroos, 2000; Sundbo and Gallouj, 2000).

The view of *a service as an offering (a product)* is the way in which the concept is used in this dissertation. However, it is important to touch briefly the other main interpretation – *service as a co-created value* – particularly because this could be a fruitful way to understand some peculiarities of the Chinese culture. Several researchers have pointed out the value aspect during the recent decades (cf. Ramírez, 1999), but it has become most commonly known along with the approach of service-dominant logic (SDL) (Vargo and Lusch, 2004, 2008). SDL focuses on theorizing based on the concept of "service", not "services". According to it, "service" refers to the process of using one's competences for the benefit of another party, i.e. it is a process in which value is created. "Services" (plural) are a particular type of goods. Both goods and services are important as conveyors of competences, but not primary to value creation. Before the value can be realized, the input from a single provider has to be integrated with other resources and this task is carried out by the customer. Thus, value is not inherent in goods or services, but co-created with the customer and essentially defined by the use context (ibid.).

In addition to the analyses of co-created value and immaterial goods, services have been analyzed as an economic sector or as part of the manufacturing and technological sectors (Carlborg et al., 2014). In this dissertation, this viewpoint is present throughout because the macro-level development in China forms the background to the conduct of business in individual companies and is even reflected in the nature of service offerings. Services are also linked to the prominence of knowledge in the present economies, and their role in tackling the sustainability issues – today's grand challenge – is increasingly understood. In the following literature review, these macro perspectives are combined with the business, process and product perspectives. The review is structured in three parts: convergence of services and manufacturing, development of the knowledge economy (including KIBS and creative industries), and the sustainability challenge.

2.1.1 Convergence of services and manufacturing

Traditionally manufacturing and services have been considered as clearly separable sectors of the economy. This view can be traced back to the so-called Fisher-Clark model which divided economic activities into three main categories: agriculture, manufacturing and services (Clark 1940; Fisher, 1945). Despite the dominance of the service sector in all developed economies, this basic model is still used in the analyses and comparisons of regional, national and international development. Even though the division as such is neutral, it has fostered a view which highlights manufacturing as the most important source of wealth. Consequently, most indicators and measures of economic success have been constructed in a way that suits to the manufacturing logic and neglects services (Howells, 2000; Djellal and Gallouj, 2013). The concept of productivity is an example: it focuses one-sidedly on cost-efficiency and does not adequately take into account effectiveness, i.e. the customer benefit which is the typical measure of success in services (Viitamo and Toivonen, 2013).

Also the research into services has reflected this bias, and it has been particularly noticeable in the areas of service innovation and services development. In the early stages, the studies on these topics set the imitation of technological and industrial innovation as the ideal. It was only in the mid of 1990s when the "assimilation" perspective was replaced with a view that paid attention to specific features of service activities and highlighted the significance of services to the economic development. Later on, the service-specific view – called "demarcationism" – took a step further and the importance of convergence between manufacturing and services was brought to the fore. This "synthesis view" has gained ground increasingly during the last fifteen years. The representatives of this view have aimed at developing common frameworks to understand the processes and products in the industrial world as well as in the service context. The blurring lines between goods and services and the growing significance of integrated solutions and systems have made this aim increasingly relevant. (Coombs and Miles, 2000; Djellal and Gallouj, 2013)

Vandermerwe and Rada (1988) were the first researchers to specify the phenomenon of "servitization", which they described as "the increased offering of fuller market packages or 'bundles' of customer focused combinations of goods, services, support, self-service and knowledge in order to add value to core product offerings" (ibid., p. 314). More recently, *four key factors have been identified that drive companies to servitize*. The first one is financial reasons, meaning that servitization may results in higher profit margins and stability of income (Gebauer and Friedli, 2005). Second, strategic considerations are increasingly important for competitive advantage of manufacturers. Many managers take services as an approach to create new business and as a differentiated way to win the competitors during the product's life cycle (Vandermerwe and Rada, 1988). Third, marketing opportunities is a driver of servitization:

manufacturers use services for selling more products to customers (Gebauer and Fleisch, 2007). Although customers have not reduced their demand for goods, they need more services to help them make the right purchasing decisions. Fourth, sustainability is an important driver due to increasingly rigid regulations concerning environmental protection and demands concerning products' environmental performance (White et al., 1999; Jacobsson, 2000).

Besides the drivers of servitization, research into industrial services can be divided into two groups: the nature of the service offerings provided by manufacturing companies, and the process of servitization. As this dissertation adopts the former viewpoint, the following literature analysis focuses on it. However, the main argumentation concerning the servitization process is also summarized. There are basically five possibilities to compile offerings: 1) pure tangibles, 2) tangibles with accompanying services, 3) goods-services hybrids, 4) services with accompanying tangibles, and 4) pure services (Kotler, 2003). Based on these possibilities, several *categorizations of industrial services* have been suggested.

Homburg and Garbe (1999) divided industrial services into three types: pre-purchase services (e.g. engineering), at-purchase services (e.g. training of operations staff), and after-sales services (e.g. technical maintenance). This taxonomy is easily perceived at the time of purchasing, but it does not describe companies' evolution and competence level in industrial services. These aspects can be found in later categorizations. Mathieu (2001) separated services supporting the product (SSP) from services supporting the customer (SSC). Her categorization is based on the direct recipient of the service, the intensity of the relationship, and the level of customization that is required in the delivery. Paloheimo et al. (2004) divided SSC further into services that support the use of products in the customer's processes, and into services that support the customer's business. Turunen and Toivonen (2011) applied a similar approach but divided SSC into services supporting the customer's processes (SSCP) and services supporting the customer's business (SSCB). The last mentioned category can be interpreted to include services supporting the client's stakeholder network, too, which means that the service provider supports the client firm in serving its customers (Cova et al., 2000).

This dissertation applies the categorization by Turunen and Toivonen (2011) in the structuration of the empirical results. They have specified the categories as follows. SSP enable the proper functioning of the product and include on call repairs, spare parts, and so on. These services are based on the transactional relationship with customers in general. SSCP ensure the optimal usage of the product in its operational environment and minimize shutdown time of the plant; they include preventive maintenance, scheduled inspection, modernization, etc. Here the provider becomes a performance partner with customers. SSCB enable the growth and success of the customer's business, consisting of consultancy, training, financial solutions, business optimization, and integrated solutions. The provider and the customer move towards a strategic partnership in this case. The transfer from SSP to SSCP and further to SSCB indicates the development status that manufacturing companies take during servitization. It results in the improvement of service competence and in the deepening of the relationship with customers.

An important direction in the discussion about industrial services has been the development away from treating services as add-ons to the manufactured goods (Vandermerwe and Rada, 1988; Oliva and Kallenberg, 2003). Instead of that, the focus has increasingly been on product-service systems (PSS) – a combination of tangible products and intangible services (Baines et al., 2007; Liu, 2009). A strong customer centricity is a key feature of the latter approach: customers are provided with a broader and more tailored solution. When the manufacturer gathers services around the material product, it usually follows the product down-stream, i.e. towards the customer (Holmström et al., 1999; Davies, 2003). For instance, manufacturers may offer inventory management and continuous supply of spare parts, or take over maintenance work. Such services are called *installed base services* (Oliva and Kallenberg, 2003). When manufacturers adopt the strategy of offering the equipment capacity as a service or when they provide integrated solutions, they typically move up-stream, taking over systems integration tasks related to their service infrastructures. A key issue is the turning of free-of-charge services into offerings that customers pay for. Adding the value by introducing new accompanying services that increase the "share of the wallet" is an important strategy here (Anderson and Narus, 2003).

The concept of integrated solutions, also called "turn-key solutions" or "full-service contracts" (Stremersch et al., 2001), has gained intense attention. These solutions focus on the client's activities and business processes, addressing customer needs in a holistic manner (Wise and Baumgartner, 1999; Brady et al., 2003; Davies, 2004). According to Brax and Jonsson (2009), integrated solutions are a bundle of physical products, services and information, seamlessly combined to provide more value than the parts alone. They address customer's needs in relation to a specific function in their business system, are long-term oriented, integrate the provider as part of the customer's business, and aim at optimizing the total cost for the customer. Howells (2004) has pointed out that there are actually two alternatives: in addition to integrated solutions, the solution can be offered as a pure service, which means that there is no transfer of ownership of the physical goods between the provider and the client. Howells (2004) has introduced the term "service encapsulation": manufactured products become encapsulated by services when the firm moves towards selling the operational capacity of the products.

As regards *the various ways in which manufacturing firms servitize*, a linear view from simpler to more complex offerings has dominated the discussion. The most famous model representing this view is the model by Oliva and Kallenberg (2003), which is based on empirical observations about the pattern of actions that manufacturers take in successful move into service or solution business. In the first stage, the companies consolidate their product related services and often relocate them in a newly created service unit. In the second stage, the companies define and analyze their installed base market, and create infrastructure to market and deliver services according to local demand. The third stage includes two alternatives. The companies can expand to relationship-based services or they can focus on process-centered services. In the fourth stage, the end-users' operation is taken over. However, not all providers and clients enter the last stage, which can be regarded as full outsourcing (Brax, 2005).

Several studies have highlighted the challenging nature of servitization. Mathieu (2001) has identified three levels of organizational intensity in service activities of industrial firms: tactical, strategic, and cultural. On the tactical level, services have an instrumental role for the provider. On the strategic level, they are considered as a relevant stream of business besides the tangible goods business. On the cultural level, the firm defines itself as a service firm. Both the gains and the risks increase when the firm moves from the tactical level towards the cultural level. Organizational intensity explains the presence of many challenges in the transition from the transaction-oriented business to service or solution business. Other researchers have identified the challenges in more detail.

The main challenges have been argued to consist of the changing orientation of the firm, the need for new capabilities, the transformation of structure and organization, and the implementation of transformation processes within the firm (Cova and Salle, 2007; Turunen, 2011). Brax and Jonsson (2009) point out that transformation processes tend to be context-specific – a view which is in line with the finding of Gebauer et al. (2007) about the failure of transformations when managers are not able to identify systemic barriers within the organization. Correspondingly, it has been considered important to define the key capabilities needed in the management of the process of servitization and the conduct of industrial service business. Davies (2004) perceives systems integration as the core capability; around this cluster the capabilities of operational services, business consulting services and financial services. Ceci (2005) has further specified operational capabilities by dividing them into production capabilities, selling capabilities, and delivering capabilities.

2.1.2 Services in the knowledge economy

Knowledge has been considered the major driving force of the global economic and social development (Dahlman et al., 2006). Particularly in developed countries, the economic advancement over the past few decades has been led by technologies based on knowledge (Powell and Snellman, 2004). Although the pace may differ, also developing countries are moving towards a knowledge based economy – in which the production, distribution and use of knowledge and information are highlighted (Clarke, 2001). The concept of knowledge economy was already raised in the early 1960s with the focus on new science and technology based industries (Machlup, 1962). Since the 1990s, the emphasis has been on the expansion of knowledge-intensive economic activities and continuous innovation by learning (Prusak, 1997; Houghton and Sheehan, 2000). The definition by Powell and Snellman (2004, p. 201) is illustrative; they define a knowledge economy as "*production and services based on knowledge-intensive activities that contribute to an accelerated pace of technological and scientific advance as well as equally rapid obsolescence*" The knowledge economy relies more on the intellectual capital than on natural resources or other physical inputs (ibid.).

The role of services is prominent in the knowledge economy (Kuusisto and Meyer, 2003). Thus, the evolution towards the knowledge economy implies restructuring from a manufacturing based to services driven development (Powell and Snellman, 2004). Knowledge-intensive business services (KIBS) have been regarded as one of the most dynamic components of the services sector (Strambach, 2001). Since the late 1990s, KIBS have aroused much interest in both research and policy (Wong and He, 2005; Brax, 2013). The rapid growth of KIBS over the past decades has been interpreted as one of the marking trends towards the knowledge economy (Müller and Zenker, 2001). In many industrialized countries (such as the US and the UK), KIBS already contribute more than 30% of the total value-added from services (Murray et al., 2009).

KIBS have been defined as economic activities with knowledge-intensive inputs to meet other organizations' business needs, and to result in the creation, accumulation or dissemination of knowledge (Miles et al., 1995; Müller and Doloreux, 2007). The term "knowledge-intensive" emphasizes that KIBS rely heavily on professional knowledge in terms of labor qualifications and interactions between the service providers and clients (Hauknes, 1999; Miles, 2005). Knowledge is not only a production factor in the form of main input, but also the output to be sold to clients (Gallouj, 2002; Strambach, 2008). KIBS companies have the ability to receive information from outside and to transform this information, combined with their own professional knowledge, into useful services for their clients (Hipp, 1999). They are not a simple carrier of information but play the role in problem-solving via tacit knowledge (Müller and Doloreux, 2007). As no single employee is able to know everything, the way in which employees are connected with internal and external actors forms the knowledge base of KIBS (Larsen, 2001). Clients are also involved in the co-production process to enhance knowledge-based solutions (Müller and Doloreux, 2007).

The concept of business services, which is part of the definition of KIBS, indicates that services are offered to other companies or organizations but not to private consumption (Strambach, 2001). As the services of KIBS companies often concentrate on problem solving, they are linked to different types of consulting activities (Müller and Doloreux, 2007; Strambach, 2008). Deep interaction between a KIBS company and clients is required as a cumulative learning process, in which the KIBS company acquires knowledge from its clients in order to offer client-specific solutions and simultaneously enhances its own knowledge base (Miles et al., 1995).

According to several studies, KIBS companies are more innovation-oriented than service firms on the average. On the one hand, they function as external knowledge sources and contribute innovations of their clients. They act as facilitators to support their clients' innovation process and the adoption of technology developed elsewhere (Müller and Doloreux, 2009). They also act as brokers by combining purchasers of knowledge, providers of knowledge, and transferors of knowledge (Larsen, 2000; Müller and Doloreux, 2007). On the other hand, KIBS companies also carry out internal innovation activities and in this way contribute to economic performance and growth (Müller and Zenker, 2001). The knowledge accumulated in client interactions is the basis for further innovations, either incremental or radical. Thus, KIBS companies are both carriers and sources of innovation in cooperation with their clients (Miles et al., 1995; Den Hertog, 2000).

KIBS have been divided into different sectors based on statistical classifications. North American Industry Classification System (NAICS, 2012) divides KIBS into three main categories: technical services (architectural, engineering and related services), computer services (computer system designs and related services), and consulting services (management, scientific and related services) (Doloreux et al., 2008). In the respective European classification – Statistical Classification of Economic Activities in the European Community (NACE) – the main categories of KIBS are computer and related activities, research and development, and other business services; the last mentioned group includes legal and accounting services, management consultancy, and technical services as the most important subgroups (Müller and Doloreux, 2009).

Even though statistical classifications are important as indicators of the rapid growth of KIBS, novel activities remain hidden in them. In order to tackle this challenge, KIBS researchers have developed other kinds of classifications. Right in the beginning of KIBS studies, Miles et al. (1995) distinguished "traditional professional services" (P-KIBS) from "new technology based services" (T-KIBS). P-KIBS refer to business and management services, like legal, accounting, and market research services, whereas T-KIBS include IT services, R&D consulting, and engineering services (Miles et al., 1995; Müller and Doloreux, 2009). More recently, "Creative KIBS" (C-KIBS) have been distinguished to deal with creative activities, such as advertising, design, and business focused media services (Miles, 2011). Some creative industries fit the KIBS definition but are not included in the KIBS sector, due to the fact that firms in these industries do not serve businesses but deliver experiences to individual customers (ibid.).

Creative industries make an increasing contribution to the knowledge economy in terms of the employment, regional development and urban dynamics (Cunningham, 2002; Andari et al., 2007). Creative industries as a discourse emerged long time ago: in 1960s when Europe attempted to generate new and practical humanities against irrelevancy and conservatism (Miller, 2009). Later on in the 1990s, the discourse moved to the policy sphere with the focus on analyzing the employment structure (Pratt, 1997; Flew and Cunningham, 2010). Based on individual creativity, skills and talent, creative industries were argued to lead to wealth and job creation in both established business sectors and emerging digital sectors (CIMD, 1998; Cunningham, 2002). Additionally, the importance of creative industries to knowledge economy does not only derive from their employment impact – a substantial number of highly skilled labor – but also from their strong focus on innovative activities that benefit other manufacturing and service sectors (Cooke and de Propris, 2011). Creative industries are nowadays considered one key source in the global growth, compensating the decline of manufacturing especially in the developed countries (Garnham, 2005). Established centers of creative production in the US, Europe and Japan maintain strong growth pace, and also some developing countries, such as China and Malaysia, have started to catch up the opportunities of creative activities (Ström and Ernkvist, 2014).

The concept of creative industries is intermingled with the concept of cultural industries; the latter has been used in cultural debates and policy analyses for decades (Hesmondhalgh, 2008). The concept of cultural industries was introduced in the 1940s when commercial entertainment had become industrially produced (Adorno and Horkheimer, 1979; Horkheimer and Adorno, 2002). Governmental policies have greatly influenced the development of cultural industries. Hillman-Chartrand and McCaughey (1989) have proposed four models to describe the government's role in the cultural sphere. In the facilitator state model, the government adopts incentives, such as tax incentives, to promote cultural production and consumption. In the patron state model, financial support is given based on the evaluation of "excellence". In the architect state model, culture is the responsibility of a dedicated ministry aligned with social welfare and national culture objectives. In the engineer state model, the government directly intervenes and controls the means of production, including media – the model characterizing the former Soviet Union and China before the 1990s (Keane and Zhang, 2008). The variety of models indicates the extent to which the government is involved in cultural production and outcomes. In practice, a mix of these models is applied depending on the specific sector of cultural sphere (ibid.).

Whereas cultural industries are linked to politics and governmental priorities, the recent concept of creative industries indicates the new opportunities emerged in the knowledge economy (Galloway and Dunlop, 2007; Flew and Cunningham, 2010). Creative industries encompass broader activities than cultural industries; these activities are enabled by the internet and digital media production in particular. However, the distinction between cultural and creative industries is not always clear, which is partly due to definitional difficulties concerning the concepts "culture" and "creativity" (Flew and Cunningham, 2010). Many activities in cultural and creative industries are also the same, and the concepts are often used either together or interchangeably by cultural economists (cf. Towse, 2003). In addition, there are country-specific applications of these concepts depending on the focus of economic development and policy. For example, the UK highlights the branding of creative industries; the US favors the concept of copyright industries which emphasizes the protection of intellectual property; and Japan applies the concept of content industries, including game, animation and other entertainment as its major parts (Xu and Yao, 2012). In this dissertation, all of these different concepts are included within the scope of cultural and creative industries.

The innovation capacity of cultural and creative industries intersects the innovation processes of other manufacturing and services sectors with innovative and creative inputs and outputs (Cooke and De Propris, 2011). This innovative role is similar to the role of KIBS (Müller et al., 2009). The firms in both sectors are innovative, not only in their own processes by actively using new information and communication technologies – but they also facilitate innovation in other sectors through creative ideas and marketing support (Miles, 1999; Gallouj, 2002). Creative KIBS as an emerging KIBS category are part of cultural and creative industries (Miles, 2011). However, there are also differences between KIBS and creative industries. Whereas knowledge is critical in KIBS, both as an input and as an output, novelty as such plays an important role in creative industries. KIBS are a "pure" service sector without physical output, but cultural and creative industries also include manufacturing activities and material elements (Caves, 2000). Deviating from KIBS, cultural and creative occupations do not necessarily require high academic education. A final difference is that KIBS are usually offered by private companies, but cultural and creative industries are at least partially supported by the government in many countries (Miles, 1999).

2.1.3 Services and the sustainability challenge

Sustainability is one of today's "grand societal challenges". The emphasis on long-term development to achieve equity between the present and future generations has gained worldwide support (Diesendorf, 2000; Smith et al., 2010). The aim is to ensure the coexistence of sustainability in the economy, society and the environment (Pope et al., 2004; Komiyama and Takeuchi, 2006). In the economy, it means the development of welfare through goods and services. In society, the focus is on the enrichment of human relationships and achievements. The environmental protection improves the integrity and resilience of ecological systems. A well-known three-pillar argument emphasizes the coexistence of these various dimensions: if any one of the dimensions is weak, then the whole system is unsustainable (Kastenhofer and Rammel, 2005). At a concrete level, the broad interpretation of sustainability aims at integrating different domains: energy resources, water, economic development, health, lifestyle, etc. (Kajikawa, 2008).

The discussion on sustainability includes two major streams: "weak sustainability" and "strong sustainability" (Cheng and Hu, 2010). The proponents of the former assume that natural capital in monetary terms is substitutable (Hediger, 1999; Munasinghe, 2001; Cheng and Hu, 2010). For example, it has been suggested that the development of new technologies in energy generation may substitute the reducing capital stock of natural gas. The advocates of latter argue that the economic activity and human society are constrained by the natural environmental system, and consequently natural capital has no substitutes (Alley and Leake, 2004; Cheng and Hu, 2010).

The striving for sustainability has stimulated many kinds of initiatives in science and technology (Clark and Dickson, 2003; Komiyama and Takeuchi, 2006). In the past few decades, both basic research and applications have supported the transition. In 1999, National Research Council in the US suggested the establishment of a new academic branch “sustainability science” to tackle the issue. The purpose was to bring together scholarship and practice as well as global and local perspectives, and to promote a multidisciplinary approach across natural and social sciences, engineering etc. (Clark and Dickson, 2003). The idea was that sustainability science is defined by the problems it addresses rather than by the disciplines it employs (Clark, 2007). A further step was taken in Japan 2006, when the Integrated Research System for Sustainability Science (IR3S) was founded to serve as a worldwide research and educational platform (Kajikawa, 2008). Today, sustainability science is increasingly a distinctive research field, which bridges sustainability issues in various disciplines to find solutions to the complex challenges (Jerneck et al., 2011).

Along with the multi-disciplinary research, a holistic view on sustainable development is gaining ground. One important research direction is the analysis of *a transition to more sustainable socio-technical systems*, which comprise a whole set of networked supply chains, patterns of consumption, infrastructures and regulations (Elzen et al., 2004; Geels, 2010). The framework of socio-technical systems provides a macro level perspective to the analysis of sustainable development. Within this framework, the socio-technical landscape describes the drivers that may break down current “regimes” and enable the emergence of innovations (Elzen et al., 2004). The concept of regimes refers to the dominant way of realizing societal functions, i.e. to structures constituted of knowledge, objects, infrastructures, values and norms (Späth and Rohracher, 2010). Landscape processes include environmental and demographic change, social movements, shifts in ideologies, economic restructuring, emerging scientific paradigms, and cultural developments (Geels, 2005). Growing environmental awareness is a landscape process; it is questioning multiple regimes, whilst generating opportunities for innovations that contribute to sustainable development through greener goods and services (Smith et al., 2010).

However, it is not enough to promote individual innovations. The systemic view points out strong interdependencies between various elements: technologies and services have to be analyzed as embedded in a broader context. Sustainable systems require major changes along the entire production-consumption chain and – not least – the behavior of the actors involved in it (Weber and Hemmelskamp, 2005). This means that social innovations have to be promoted hand in hand with systems innovation. A versatile composition of participating actors is needed, including industrial firms, financial service providers, consultancies, and universities. Both firm-level efforts and institutions operating beyond the firms are important. Institutions highlight the role of policy-making and governance processes. In markets, central issues are the integration of clean technologies in safety standards and other market rules, and effective and prospective market demand. (Smith et al., 2010)

Sustainable urban living is a significant component in the overall scheme of sustainable development (Joss, 2010). Along with the global trend of urbanization, cities have become the main places of distributing and consuming goods and services. The fast growth of cities is anticipated to continue throughout the 21st century, resulting in a situation where the majority of people will live in urban areas (Vlahov and Galea, 2002). The development has considerable effects on the environment through changes in consumption and pollution (McDonald et al., 2008). The challenges of urbanization are particularly severe in developing countries. The continuous growth of cities has caused serious environmental problems: air pollution, traffic jam, and energy shortage. The concept of sustainable city or eco-city has been adopted as one solution (Yigitcanlar, 2009). It aims to integrate different aspects of environmentally and socially viable development: city planning, human-nature interaction, infrastructure systems and energy production, and the provision of services. Housing is considered crucial in avoiding the negative effects of social stratification. The concept of green building is applied to refer to a process that is environmentally responsible throughout a building's life-cycle: from siting to design, construction, operation, maintenance, renovation, and demolition (Kenworthy, 2006). In China, eco-cities are an important policy initiative (Cheng and Hu, 2010).

Boosting the development of sustainable cities with the new solutions based on digitalization (e.g. big data and internet of things) has gained popularity during the recent years (Souter et al., 2010; Caragliu and Nijkamp, 2011; Ciocoiu, 2011). Many countries apply the concept of smart city as a practical application to deal with sustainability challenges – to establish visual and measurable urban management and operations with intelligence (Su et al., 2011). Digital technology is used for solving the problems in public services, for strengthening the social management systems, and for dealing with the issues of urban ecology. The goal is to promote sustainability via effective governmental operations, advanced industries, and an efficient information infrastructure. Opening the public data reserves is often linked to these efforts: certain data is made freely available to everyone to use and republish (Davies, 2010). Public authorities develop new collaborative ways of working with data users, including commercial users – and where necessary engage in the market to stimulate demand for data. Open energy data, meteorological data and transport data are examples that are directly linked to the sustainability topic. “Sustainable digital economy” has also been argued to change the lifestyle of people for the benefit of economy, environment and society (Miller and Wilsdon, 2001).

Studying services linked to the sustainability issues has been surprisingly rare. One reason may be that the central role of technology disguises the service aspects in the sectors that are crucial from the viewpoint of sustainability. The role of efficient technological solutions is apparent in the production and distribution of energy, in the systems of traffic and transportation, and in the construction and maintenance of infrastructure and buildings. However, *what users actually need is service*: healthy and comfortable homes, safe and fast traffic, and balance between natural and built environment. In the case of energy, for instance, the use value does not derive from technology as such but from its ability to convert sources and flows of energy into heating, cooling, and lighting (Haas et al., 2008).

Besides the inherent service nature that manifests itself in the use of technology, attention should be paid to *services that support the promotion of sustainability*. A change in user preferences is necessary in order to avoid undermining the sustainability efforts by consumption patterns (Weber and Hemmelskamp, 2005). This raises the need for many types of information and advisory services that facilitate the decision making and practical operations among citizens. Corresponding support is needed among organizational stakeholders both in the private and in the public sectors. The number of environmental consultants has been increasing as a new sub-group of KIBS. These "agents of greening" (Evers and Menkhoff, 2004) provide consultancy in the areas of waste disposal, emissions and discharge monitoring, remediation and clean-up, environmental auditing, environmental impact assessment, and eco-design. The growing collaboration between producers and users in sustainability issues will drive the further development of support services. Another trend that emphasizes the role of KIBS is the increasing importance of knowledge, innovation and creativity in the visioning and planning of sustainable solutions (De Sousa, 2006; Yigitcanlar, 2009). KIBS function in all the realms of economic, environmental and social sustainability (Mohamed et al., 2009).

Also the servitization of manufacturing has linkages to sustainability issues. Several researchers have recently pointed out that sustainability should be included among the key external drivers of servitization. The most immediate reason is the pressure coming from the increasingly rigid regulations that governments have implemented concerning the protection of the environment. In addition, customers demand more performance friendly products and services (White et al., 1999; Jacobsson, 2000). As an answer, manufactures are turning the governmental pressure and customer demand into a strategic opportunity and alter the focus of their business models from selling products to providing services (Rothenberg, 2007). Value-added services are offered to satisfy customers' sustainability needs and to improve the social, economic and environmental performance during the whole product life cycle (Belz and Peattie, 2009).

2.2 Internationalization of services

Services have become important in the economic and social well-being of both developed and developing countries (Cicic et al., 1999). During the recent decades, service companies have also been active in internationalizing their business operations (Pla-Barber and Ghauri, 2012). The share of foreign direct investments (FDI) in services has already surpassed those in manufacturing (UNCTAD, 2004). Customers' demand on services is increasingly answered on the global basis. The internationalization of services was found to be a core phenomenon in the general globalization of economy more than twenty years ago (Vandermerwe and Chadwick, 1989). Nowadays the internationalized service companies link together geographically dispersed economic activities and lead to a growing interdependence of production and marketing activities across nations (Braga, 1996). There are several drivers that have supported this development. The first driver is the transfer of labor-intensive manufacturing from industrialized to low cost countries: when manufacturers have globalized, their service providers have followed (Cicic et al., 1999). Second, many services that were regarded as non-tradable before are nowadays available for the international trade due to the advancement of ICT (Braga, 1996). In the future, this advancement will further reduce the costs of communication and make national borders less important (Cicic et al., 1999). Third, the outsourcing of services has reinforced their internationalization process (Sánchez-Peinado and Pla-Barber, 2006).

Research on the internationalization of services is lagging behind the respective research on manufacturing (Apfelthaler and Vaiman, 2012). Especially quantitative data that would show the actual extent of international operations in service business is insufficient. The situation is better on the qualitative side: quite many studies have been carried out concerning the forms of foreign presence and the paths of going global in services. These studies are summarized in this chapter. The need for a strategic approach has been emphasized by several researchers. In addition to the selection of the basic operational model and the path to foreign markets, important elements in an internationalization strategy are a business model and positioning in the value chain in the target markets (Morris et al., 2005). These topics are also reviewed in the present chapter.

2.2.1 Forms of foreign presence

The ways in which firms operate in the international markets are generally divided into three main forms: *foreign direct investments (FDI), exports, and foreign presence through third parties* (Vandermerwe and Chadwick, 1989; Sondheimer and Bargas, 1993). All these forms are also applied in services but they include some specificity in the service context.

Foreign direct investments were earlier regarded as the main form of international delivery of services. The reason for this view was the non-storable nature of services and the need for close interaction (face to face contact) between the providers and clients (Roberts, 1998; Braga, 1996). FDI vary from wholly owned subsidiaries to a major or minor share of joint ventures in other countries (Blomstermo et al., 2006). The ownership in FDI may take place via the establishment of a subsidiary as green field internationalization, or via a merger or an acquisition. The latter practice has become increasingly common in services (Roberts, 1998). Also the degree of centralization can vary: the head office may make the plan for local operations or the subsidiary may have considerable freedom in developing local services (Howells and Roberts, 2000). Since it is a natural way to produce services in the foreign markets where services are consumed, FDI in services is market seeking oriented (Ramasamy and Yeung, 2010).

In exports, services can be delivered in the material form (e.g. a report), through travelling persons, and through the internet (wired exports). The importance of personal interaction plays a role again when services are exported: travelling is the predominant model. However, due to the abundant resources required, it is increasingly replaced today by wired exports in the cases where knowledge is codifiable (Toivonen et al., 2009). The internet has displaced a major part of the delivery of services in material forms, and video meetings are organized instead of travelling. For instance, KIBS companies and servitized manufacturers deliver training and consultancy to their international clients over the internet (Javalgi et al., 2004). There is, however, a specific type of service which has survived the change: the so-called export projects, that are an intermediate form between FDI and exports. Export projects are common in engineering consultancy in particular, and mean a temporary presence in the target market. Instead of expansion in a specific country, the aim is to use the same expertise with slight modification in many different countries. This is a way to avoid risks linked to unpredictable or unstable service demand in certain markets (Léo and Philippe, 2001).

Foreign presence through third parties may take the form of franchising, licensing or other partner arrangements (Toivonen et al., 2009). In franchising, the focal company provides other companies with the right of use of a tested service concept for a contract period against a fixed payment. The receivers benefit from the efficiency and the cost reduction that the ready-made concept offers, and the provider benefits from the rapid growth of business that the entrepreneurship-based network enables (Alon, 2005). In services, franchising has received popularity in fast food sector for instance, but it has been very rare in KIBS-type activities; one reason may be the tight centralization that is not compatible with expert work (Toivonen et al., 2009). Licensing is also rare in KIBS, and all in all it is much more common in manufacturing than in services. Here a company provides another company with a right to represent it in a target market on specified terms, often exclusively (Grönroos, 1999). While franchising and licensing are not extensively used in services, other partner arrangements are popular. They vary from non-equity cooperation to contracts that include small ownership. They may include a common brand, common acquisition of clients and contacts, common subcontracting, common R&D and training, and even partially common ways of working. Also deeper forms of cooperation such as strategic alliances are possible (Tapscott et al., 2000).

The model that is applicable in an individual firm depends both on *the resources and skills of the firm* and on *the nature of the service*. All forms of foreign presence require contacts and material resources as well as know-how on international business (Glückler, 2004). Trusted partners and existing contacts are most critical in operations through third parties, whereas material resources are emphasized in FDI (Toivonen et al., 2009). Some models require specific skills: for instance, know-how in project management is a prerequisite for successful export projects. As regards the nature of the service, the most important question is the extent to which production and consumption are separable locally and temporally. A categorization into soft (inseparable) and hard (separable) services is commonly used to describe the basic difference (Erramilli and Rao, 1990; Majkgård and Sharma, 1998). The former services require that the provider must be present in the delivery, which can be achieved by using FDI, export projects or travelling to the client (Ekeledo and Sivakumar, 1998). In the latter services, more options are available: exports (often via the internet) and operations through third parties are also possible. Soft services are typically offerings where the elicitation and interpretation of tacit, context-specific issues plays a central role; hard services include information of a more generic nature (Majkgård and Sharma, 1998). Today, the development of ICT has made the difference less sharp: services that in earlier times were characterized as “soft” can nowadays be transmitted to the clients via increasingly smart and interactional technological channels (Ball et al., 2008).

A balance between risk and control is an important aspect in the selection of the form of foreign presence (Glückler, 2004). Direct investments offer the possibility of the highest control but due to their resource demanding nature they include the highest risk, too. In exports, the possibility of control is small but so are also the risks. Collaboration via third parties is a compromise: it requires fewer resources than investments and enables more control than exports. (Vandermerwe and Chadwick, 1989) The amount of control depends both on the nature of interaction and on the clarity of the service concept. Systematization (“productization”) of the service is usually a prerequisite of success in this context (Toivonen et al., 2009).

2.2.2 Paths in entering the foreign markets

There are two main ways in which service companies go global: *following a client to the foreign markets* or *internationalize independently.* A traditional argument has been that services internationalize because their clients operate in foreign markets or are entering these markets (Roberts, 1998). More recent studies have shown that following the clients is not the only path that service firms take; yet, it is more prevalent in services than in manufacturing (Glückler, 2004). It is quite common in KIBS, among other sectors (Kautonen and Hyypiä, 2009).

A great benefit of internationalization with clients is the reduction of risk. The service company has information about the target market right from the start and the client’s existing contacts diminish the entry barriers (Majkgård and Sharma, 1998). A service company which follows its client has the advantage of becoming a part of the client's international network. Serving a multinational enterprise (MNE) in one country often leads to the continuation of cooperation in other countries (Toivonen et al., 2009). In addition to the experience and contacts of clients, their urgent service needs may encourage service companies to internationalize – even more rapidly and to more distant countries than they would have done alone (Erramilli and Rao, 1990). On the other hand, the strategy of the client may restrict the choices that are available for the service provider (ibid.). This point is especially important in the case of big clients. The first steps in foreign markets often influence considerably the later development of the service company. Difficulties may also arise later if the client's volume of orders is seasonal or gradually diminishes. Therefore it is important that the service company is not too dependent on its clients but – even when entering the market with a client – soon develops its own initiative and versatile activities that familiarize it with the local culture and stakeholders (O'Farrell et al., 1998; Glückler, 2004).

Whereas the following of clients is beneficial for the above-mentioned reasons, an independent path is a more proactive way to seek attractive foreign markets for the future growth (Cicic et al., 1999; Lommelen and Matthyssens, 2005). On this path, there are two alternatives: *gradual (stepwise) internationalization* and *rapid internationalization.* The former alternative means that a service firm internationalizes cautiously from less risky decisions towards more demanding ones (Erramilli, 1991). A factor that favors a cautious process is the importance of experience in international operations, and the fact that the accumulation of experience takes time. Also many practical operations are time consuming: services, distribution systems and supply channels have to be adapted to meet the local demands (Majkgård and Sharma, 1998). Finally, the building of credibility and trustworthiness in client and partner relationships demands resources and time, and speaks for a step by step approach (Contractor et al., 2003).

Cautiousness may be visible in the selection of markets and/or in the forms of operation in the target markets. In the market selection, cautiousness leads to preferring a short "psychic distance": international activities are started in those countries whose industrial structure, business habits, culture, etc. resemble the domestic market (Ekeledo and Sivakumar, 1998). Neighboring countries have often been found to be the first choice (Root, 1994; Glucker, 2004). The basically local orientation of service companies has also been pointed out: it has been argued that in many service sectors companies have not been interested in international activities especially in earlier times (Roberts, 1998). KIBS studies, for instance, have indicated that expert companies strive first for a stable position in local markets; then they may reach out to a national market and only thereafter possibly go abroad (ibid.). In the forms of foreign operations, cautiousness has been suggested to appear in the stepwise transfer from the operations that require small commitment (like activities through a partner) to the establishment of a subsidiary (Majkgård and Sharma, 1998). This idea has, however, met critique; export projects clearly show that the final aim of an internationalizing company is not always the establishment of a subsidiary. These projects also speak against the importance of short “psychic distance” (Rubalcaba and Toivonen, 2015). For several decades ago, it was pointed out that many European engineering offices have started their internationalization in distant places, often in developing countries where the business environment radically differs from that of the home country (Sharma and Johanson, 1987).

Cautious internationalization as a preferable path became more generally questioned, when the rapid internationalization of IT companies aroused attention in the mid-1990s (Bell, 1995). Soon the rapid processes were identified in other service sectors, too (Madsen and Servais, 1997). A specific group among rapidly internationalizing companies is “*born globals*” – companies whose business model includes international operations right from the start (Rennie, 1995; Rönkkö, 2001). Typically internationalization occurs in these companies simultaneously in many different forms: (wired) exports, subsidiaries, strategic alliances, and non-equity networks (Toivonen, 2002). Researchers have characterized “born globals” as companies that perceive the world as one market and focus on some niche sector where they aim to attract predecessors throughout the world as their clients. Thus, the number of clients in one country need not be large. A typical approach linked to the rapid progress is making tests in various markets and having high tolerance regarding mistakes. “Born globals” are usually small entrepreneurial companies in which the managers have acquired international experience before the establishment of the company. (Madsen and Servais, 1997; Chetty and Campbell-Hunt, 2004)

The different paths – following a client vs. internationalizing independently or selecting a stepwise approach vs. progressing rapidly – do not exclude each other. Service companies may combine features of several paths: they may take a different path in different countries or at different stages of the internationalization process (Majkgård and Sharma, 1998). An example of mixing is the perception that also “born globals” may take their first international steps in neighboring countries and only thereafter penetrate rapidly to global markets (Chetty and Campbell-Hunt, 2004). Correspondingly, cautious companies often speed up their internationalization process when the experience accumulates and the company is involved in the fierce competition (Roberts, 2001). They may also skip some stage in their stepwise path. It is also possible to carry out the internationalization process in a different pace in different countries. In addition, following a client and operating independently may go hand in hand: a service company follows a client to some specific target market, but selects some forms of operations independently (Majkgård and Sharma, 1998). Thus, even though the idea of internationalization comes from a client and serving this client is the primary task, a service company may simultaneously develop its own strategy (O’Farrell et al., 1998).

2.2.3 Business models, value chains and networks

The combinations of different internationalization paths have highlighted the role of a strategic stance when firms go global (O'Farrell et al., 1998). The strategy of a firm is often crystallized in the business model. Several scholars have pointed out that every company has a business model, whether that model is explicitly articulated or not (Chesbrough, 2006; Teece, 2010). However, if a company is unaware of its business model, leveraging the model is occasional and change needs are not recognized (Johnson et al., 2008). The feasibility of the business model in the target market is the basis of success in internationalizing companies.

Research into business models became popular during the rise of the digital economy in the 1990s, when companies had to change the ways in doing business (Ghaziani and Ventresca, 2005). Thus, the analysis of business models has been linked to the service sector – particularly to IT services – right from the beginning. Nowadays, there are both studies that aim to create a general framework for the description of business models and studies that examine business models of some specific industries.

Morris et al (2005, 727) define the concept as follows: *"A business model is a concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in defined markets."* In this definition, the authors describe a business model at three different levels: at the rudimentary level, business model is concerned with the firm's profit generation logic; at the operational level, the focus is on the design of the firm's internal processes and infrastructure for value creation; at the strategic level, the firm's market positioning, competitive advantage and sustainability are emphasized. Thus, the business model describes the value capture from the firm's basic profit generation to its competitive advantage.

The value logic has been highlighted in other business model studies, too. Magretta (2002) presents the business model as an economic logic that delivers value to customers at a certain cost. Similarly, Shafer et al. (2005) define it as a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network. This view is also supported by Chesbrough (2007), who regards value creation and value capture as two important functions performed by the business model. In the actual construction of a business model, the identification of key components has been regarded as a central task. The way in which different authors structure the business model varies to some extent, but the basic idea is similar. As Seppänen and Mäkinen (2007) summarize, the components of business models have consisted of objects from both the demand and supply sides, such as the resources of a firm, value proposition, market characteristics and revenue model.

The business model concept is often linked to the concept of value chain (Kaplinsky, 2004; Morris et al, 2005). According to Rappa (2001), a company generates profit by specifying its position in the value chain. This statement corresponds to Timmers' (1998) view that architectures for business models can be identified via a value chain deconstruction and reconstruction. Brown (1997) considers the value chain as a tool to disaggregate a business into strategically relevant activities. Kaplinsky (2004) highlights that the value chain is process oriented, covering the full range of activities that are required to bring a product or service from conception, through the intermediary phases of production and delivery, to final consumers and disposal after use. To simplify, the value chain includes the main activities in the process: concept design, product/service development, and marketing.

During the last two decades, the movements of companies along the value chain have aroused attention. Holmström et al. (1999) conceptualize these movements as shifts of the "value offering point (VOP)": the point where the supply and demand chains of the provider and the client meet. Demand and supply are functions of a firm's position in relation to other participants in the same value chain. Upstream and downstream participants constitute an individual firm's supply chain and demand chain respectively (Horvath, 2001). Studies on value chain management have been carried out mainly in the context of manufacturing – servitization strategies have been considered central in the transfers upstream and downstream. However, the approach is applicable in "pure" services, too. In the conventional – arm's-length buyer-seller relationship – VOP is based on fulfilling orders. An alternative is "offer to planning": analyzing how the customer demand can be met with more advanced services (Holmström et al., 2001).

While there has been a growing consensus about the strategic importance of integrating the various activities in the value chain, many authors have preferred analyzing the context of value creation in terms of a value network (Allee, 2003; Möller and Svahn, 2006; Lusch et al., 2010). Be it a chain or a network, there are several possible actors who possess the necessary knowledge for understanding and coordinating the multi-tiered and distributed "value segments". The role of service providers, KIBS companies in particular, as integrators has aroused much interest (cf. Windrum, 2002). Despite their generally small size, KIBS companies have the ability to combine generic knowledge with the embedded tacit knowledge typical of practical applications (Miles, 2005). Besides the integrator's role, KIBS companies function as nodes and hubs that synchronize several complex resource domains and bridge different stakeholder groups (ibid.). The position of KIBS companies in the value chain is an important perspective that is used to analyze the internationalization of services in this dissertation. The concept of VOP is applied in this context.

2.3 The issue of cultural differences

Culture is *"the collective programming of the mind which distinguishes the members of one group or category of people from another"* (Hofstede, 1991, p. 5). Cultural differences manifest themselves in many ways: there may be differences in language, social structure, ideology, moral, work ethics, customs, habits and so on (Goodnow, 1985). Generally, the impacts of cultural differences have been a popular research topic (cf. Hall, 1976; Hofstede, 1980), but studies in the context of service business are scarce. Those studies that exist have argued that cultural differences lead to higher uncertainty avoidance in services than in manufacturing and technological areas due to the close interaction between the service providers and clients (Kogut and Singh, 1988). Because services are often delivered in a direct contact with clients, they are particularly sensitive to cultural issues (Czinkota and Ronkainen, 1995).

Cultural factors may become significant obstacles in internationalization, especially when the home and host markets are very different in their cultural backgrounds (Samiee, 1999). The increasing international business and communication between the West and the East has brought these differences to the fore. China, as the focus country of this research, is an important representative of the Eastern culture. Its socio-political situation and long tradition of Confucianism create a unique cultural climate which is unfamiliar to representatives of Western countries and clearly manifests itself in the service business. In this chapter, cultural differences are first discussed generally, and thereafter differences between Western and Eastern cultures are characterized. Finally, the Chinese business culture and its implications are opened up.

2.3.1 General impacts of cultural differences on service business

In the early categorizations of cultural differences, communication styles were a central phenomenon to which researchers paid attention (Glenn, 1981; Hofstede, 1980; Levine, 1985). It was an important aspect in Hall's pioneering model (1976), too. This model discriminated between "low context" and "high-context" cultures, which Hall considered to differ in the communication style but to show other differences as well. The analysis of differences in the role of relationships and networks – "mutual involvement" of people – is important in particular. Later on, other dimensions have been identified. A widely used model is provided by Hofstede (1980, 1991; Hofstede and Bond, 1988). Originally, it separated four dimensions in cultural differences: power distance, uncertainty avoidance, individualism vs. collectivism, and masculinity vs. femininity (Hofstede, 1980). Along with the empirical studies – that Hofstede and Bond have conducted in 70 countries to validate the model – the fifth dimension of long-term vs. short-term orientation was added (Hofstede and Bond, 1988; Hofstede, 1991). Another well-known model is the categorization of Trompenaars (1996; Trompenaars and Hampden-Turner, 1997), which includes the dimensions of universalism vs. particularism, individualism vs. collectivism, affective vs. neutral, specific vs. diffuse, achievement vs. ascription, sequential vs. synchronic time orientation, and internal vs. external environment control.

In the following analysis, the contents of the above-mentioned categorizations and models are discussed and some examples in the service context are provided. Table 2 on the next page summarizes the discussion. Most of the cultural dimensions presented by the authors are very relevant for the examination of the specificities in China. The analysis starts from the communication-centered models of Glenn, Levine and Hall and continues to the multidimensional models of Hofstede and Trompenaars. These multidimensional models include some mutual overlapping. They also overlap with the models that focus on the dimensions linked to communication. However, because Hofstede's and Trompenaars' models have aimed to form an overall picture of cultural differences, each of them is presented as an independent whole and the overlapping is commented when it exists.

The concepts of low-context and high-context cultures introduced by Hall (1976) emphasize the role of networks and interaction in everyday life. Low-context cultures operate on the basis of the unambiguous written word. High-context cultures on the contrary can be characterized as "relationship cultures" in which people are deeply involved with others. The continuum implies differences in communication: in low-context cultures, explicit communication is favored, whereas in high-context cultures communication may include tacit elements that are shared on the basis of the common context.

The concepts of associative vs. abstractive tendencies by Glenn (1981) deal with similar differences as the high- and low-context dimension. Actors in abstractive cultures appreciate explicit information and facts, whereas communication in associative cultures includes more tacit elements: mutual understanding can be achieved on the basis of common thought patterns and contextual meanings. Also Levine (1985) has recognized the corresponding variety in the phenomena of communication but described it from a slightly different perspective. He has made a separation between direct and indirect communication. Certainty and clarity are central characteristics in direct communication; in indirect communication, the dialog is more ambiguous but may be an important way to maintain good relationships (ibid.). Several categorizations focusing on communication indicate that researchers are quite unanimous about the central role of the communication style in cross-cultural contexts (Korac-Kakabadse et al., 2001).

Table 2: Dimensions of cultural differences

Authors	Cultural dimensions	Characteristics of cultural dimensions
Hall, 1976	Low-context vs. high-context orientation	Low-context cultures are highly individualized and fragmented with little involvement in people; in high context cultures, people are involved with others and subtle messages with deep meaning flow freely.
Glenn, 1981	Abstractive vs. associative tendency	Abstractive tendency needs information that is explicit; associative style relies on shared patterns and meanings.
Levine, 1985	Direct vs. indirect communication	Direct communication appreciates certainty and clarity; indirect style allows ambiguous information.
Hofstede, 1980, 1991; Hofstede and Bond, 1988	Power distance	The extent to which less powerful members expect and accept that power is distributed unequally
	Uncertainty avoidance	A society's tolerance for uncertainty and ambiguity
	Individualism vs. collectivism	The degree to which individuals are integrated into groups
	Masculinity vs. femininity	The distribution of roles between the genders: femininity pertains to societies in which social gender roles overlap.
	Long-term vs. short-term orientation	Fostering virtues oriented toward future rewards vs. fostering virtues related to the present and past
Trompenaars, 1996; Trompenaars and Hampden-Turner, 1997	Universalism vs. particularism	Individuals' attitudes towards universal principles (e.g. rules, laws) as opposed to personal relationships
	Individualism vs. collectivism (communitarianism)	An individual's primary orientation either to the self or to the group's common goals and objectives
	Affective vs. neutral	Affectivity allows the expression of emotions freely and openly; neutrality requires emotional control.
	Specific vs. diffuse	Specific cultures keep life spheres (family and business) separate, with single level of personality; diffuse cultures integrate them, with several levels of personality.
	Achievement vs. ascription	Individuals derive status from what they have accomplished vs. what they have ascribed, e.g. wealth.
	Sequential vs. synchronic time orientation	Sequential cultures value punctuality and planning; synchronic cultures favor flexibility and multi-tasking.
	Internal vs. external environment control	Individuals believe that they can exert control over the environment vs. the environment controls individuals.

In Hofstede's (1991) five-dimensional model, the first dimension – power distance – reflects the level at which a society accepts an unequal distribution of power and privileges. It influences the hierarchy and dependency relationships in organizations (cf. Soares et al., 2007). If the power distance is high, cultures usually rely on centralization and tolerate tight control and vertical top-down communication (Donthu and Yoo, 1998). If the power distance is low, equality and bottom-up communication are important principles (Smith et al., 2003). The second dimension – uncertainty avoidance – refers to the extent to which people feel threatened by unknown or ambiguous situations and try to avoid them. Uncertainty avoidance has been found to lead to change resistance, less risk-taking and conflict avoiding behavior (Clark, 1990; Patterson and Smith, 2001). The third dimension is individualism vs. collectivism. In individualist cultures, the interests of individuals dominate over the group interests, whereas in collectivist cultures, the dominance is reversed (cf. Signorinia et al., 2009). The fourth dimension "masculinity vs. femininity" identifies different values linked to gender roles. Masculinity appreciates assertiveness and achievement; femininity highlights caring of others and of the living environment (cf. Signorinia, et al., 2009). The fifth dimension separates long-term oriented cultures from short-term oriented ones. It was introduced in Hofstede's model in 1991 and highlights that a culture may be primarily focused on the future or it may be focused on the past and the present. Long-term oriented cultures foster virtues like perseverance and thrift, whereas short-term oriented cultures value realized benefits or benefits expectable in the near future.

Some dimensions in Hofstede's model have linkages to the discrimination between low- and high-contexts (Hall, 1976). Researchers commenting on Hofstede's model have found these linkages in the dimensions of uncertainty avoidance and individualism-collectivism, for instance. Furrer et al. (2000) have analyzed the manifestations of uncertainty avoidance in low-context and high-context cultures. According to them, visible evidence helps to diminish the perceived risk in the former, whereas close relationships fulfill the same function in the latter. Korac-Kakabadse et al. (2001) have noted that some of Hofstede's empirical studies directly indicate that low-context cultures are generally individualist and high-context cultures generally collectivist.

Trompenaars' model (1996) includes seven dimensions of cultural differences (also Trompenaars and Hampden-Turner, 1997). Five of them – universalism vs. particularism, affective vs. neutral, specific vs. diffuse, achievement vs. ascription, and internal vs. external environment control – supplement the earlier models. The dimension of sequential vs. synchronic time orientation concerns a variety recognized by Hofstede (1991), but from a different angle. The dimension of individualism vs. collectivism (called individualism vs. communitarianism in Trompenaars and Hampden-Turner, 1997) corresponds to the same dimension in Hofstede's model (1980).

The dimension of internal vs. external environment control illustrates the relationship with the environment (nature); the dimension of sequential vs. synchronic orientation deals with the meaning of time; and the other five dimensions interpret relationships with other people. However, also the dimension of internal vs. external control has implications to human relationships: according to Trompenaars (1996), the assumption that man is subjugated to nature results in actions towards others. In the following, the six dimensions of Trompenaars that differ from Hofstede's dimensions are opened up.

In the dimension "universalism vs. particularism", universalism implies the application of general rules and favors standard procedures; particularism encourages flexibility and adaptation to various situations. The dimension "affective vs. neutral" refers to the extent in which people openly express what they think. In an affective culture, emotional expressions are usual whereas in a neutral culture, the ability to control emotions is appreciated and leads to the avoidance of direct judgment and conflict (Trompenaars, 1996; cf. Ueltschy et al., 2007). This dimension has some touch points with the "low-context vs. high-context" dimension (Hall, 1976). However, the latter dimension also includes many other aspects and the relationship is not straightforward. The dimension "specific vs. diffuse" depicts the extent to which different life spheres are integrated. The relationship between personal life and working life illustrates the extremes of this dimension. These spheres are clearly separated on the one end (specific), whereas a holistic view combining them characterizes the other end (diffuse). (Trompenaars, 1996) The dimension "achievement vs. ascription" focuses on the way in which status is typically acquired in a culture (cf. Jun and Lee, 2007). Achievement-based cultures prefer skills-based judgement and rewards whereas ascription-based cultures promote status based on experience (Gilbert and Tsao, 2000). The dimension "internal vs. external environment control" describes the broadness of the general mindset in a culture. Internal control refers to determination by the inner-directed judgments, decisions, and commitments of a group, organization or community. External control grounds the activities of actors on outside signals, demands, and trends (cf. Straub et al., 2002). This dimension influences, among others, the way in which innovations are pursued. Internal orientation aims to stimulate ideas and develop innovations in-house. External orientation favors open innovation practices, seizing ideas that have originated outside and refining them collaboratively (Trompenaars, 1996). The dimension "sequential vs. synchronic" concerns the structuration of time. Punctuality and planned schedules are highly valued in sequential cultures, whereas multi-tasking and flexibility regarding time are preferred in synchronic cultures. (Trompenaars and Hampden-Turner, 1997)

All the above-mentioned dimensions have significant impacts on business practices in cross-cultural contexts. As noted in the beginning of this chapter, the issues are often particularly sensitive in service business. Communication gaps are typical. Practices that are highly valued in the cultures favoring direct communication, such as frank comments and straightforward assessments, may be regarded as rude and conflict-creating behavior in the cultures of more subtle communication (Ueltschy et al., 2007). Service customers from cultures preferring direct communication evaluate services on the basis of concrete evidence, such as data, efficient delivery and task completion – whereas cultures with indirect communication focus on the quality of the interaction with service providers (Riddle, 1992; De Mooij, 1998).

In high-context cultures, the building of relationships and trust are important before any business can be carried out; in low-context cultures, the relationships and trust are expected to develop over time after the business activities have been started (Ueltschy et al., 2007). In cultures with a high degree of individualism, customers usually demand services promptly in terms of responsiveness and reliability, but maintain a distance between themselves and providers. In cultures with a collective emphasis, the close relationship during the service process plays a significant role (Furrer et al., 2000).

Also the issues of power and status have implications to service practices. For instance, high power distance may appear as high expectations among the customers regarding the behavior of service personnel. Studies have even revealed that in some cultures service personnel are required to show extra courtesy and behave in a manner which shows a "lower status" compared to customers (Mattila, 1999; Wong, 2004). The dimension "universalism vs. particularism" may be reflected as a different attitude towards standardization and customization. As universalism supports equal treatment, standard services seem compatible with it; particularism with its emphasis on unique treatment can be expected to favor tailor-made services (Ueltschy et al., 2007). Differences in the definition of status may lead to differences in subordinate-superior relationships in service organizations. If the status is based on the achievement culture, the hierarchy may be lower because younger employees, too, have the possibility to show their competence. In an ascription culture, reliance on the authority – those who possess the "ascribed" knowledge – may be required (Lorenzoni and Lewis, 2004; Usunier, 2005).

As regards the dimension "masculinity vs. femininity", masculinity can be expected to appear as professionalism, neutral behavior, and presentation of objective facts in the service encounter, whereas femininity may emphasize the ability to internalize the viewpoint of the customer (Soares et al., 2007). The dimension "specific vs. diffuse" influences the efforts carried out in the solution of customers' problems. If business is seen as a separate sphere, the answer to the customer need covers the specific request. If the border between business and private life is vaguer, the request is understood in its context, which means that the related needs may be mapped and service personnel is ready to extend the work and invest personal resources in the relationship building (Brady et al., 2001).

Finally, the time perspective and openness manifest themselves in the behavior of both parties in the service encounter (cf. Youngdahl et al., 2003). Customers in long-term oriented cultures may be tolerant to accept modest or even poor services if other rewards can be anticipated in the future (Donthu and Yoo, 1998). A close and long-lasting relationship with the service provider – involving reliability, responsiveness and empathy – is often such a reward (Furrer et al., 2000). The “internal vs. external” dimension plays a role in the realization of this reward: a genuine service attitude is often linked with an external orientation (Keh et al., 2007). People in internally oriented organizations may focus too much on the tasks and issues in which they are skillful and competent and neglect the active and rapid response to customer needs (Trompenaars, 1996).

2.3.2 Characteristics of Western and Eastern cultures

Researchers have aimed to create understanding on the cultural variability by clustering countries and nations based on their similarity on the cultural dimensions discussed in the former chapter (Dickson et al., 2012). In Western countries, four clusters have been typically separated: the Anglo-Saxon culture, the Germanic culture, the Latin culture and the Nordic culture (Perlitz and Seger, 2004; Bouckaert, 2007).

The Anglo-Saxon culture refers to the dominant values and behavioral inclinations in countries like the UK, the US, Canada and Australia (ibid.). A strong individualism shared in this culture fosters self-interest above the concerns for others (Becker, 2000). The power distance is low and makes the people in this culture relatively equal (Hofstede, 1991). Germanic culture, dominated by German and expanded to Switzerland, Austria and Belgia, is less individualistic than the Anglo-Saxon culture. It fosters the building of long-term cooperative partnerships between owners, managers and workers (Schneider and Littrell, 2003). Professionalism, with a considerable degree of self-discipline and self-programming, plays a crucial role in this culture (Reihlen, 2002). Latin culture, including Spain, Portugal, Greece, and to a lesser degree, France and Italy, shows differences from their neighbors (Becker, 2000). The power distance is higher and individualism is lower than in most other Western countries (Hofstede, 2001). Outside the Western countries, some countries in Latin America, such as Mexico and Brazil, also share similarities with this culture (Mignolo, 2009). Nordic culture (Norway, Sweden, Denmark, and Finland) exhibits even lower power distance and much lower masculinity than the Anglo-Saxon culture (Perlitz and Seger, 2004). Hierarchical thinking is quite uncommon in the Nordic society and “big chief” seems to be removed in the mentality (ibid.).

Although variety exists, Western cultures differ from each other much less than they differ from Eastern cultures in Asia. Asia is not only a geographical location, but nurtures value judgments different from Western countries (Heryanto, 2000). On the other hand, Asia is not a culturally homogenous Eastern space. Similarly to the Western cultures, there are cultural clusters in Asia, composing of a multitude of cultural features. In addition, East Asia differs from Southeast Asia and South Asia as regards cultural homogeneity within countries. In many countries of East Asia (China, Japan, Korea and Vietnam), cultural homogeneity is high. On the contrary, the postcolonial countries in Southeast Asia and in South Asia are multicultural. Examples of the former are Malaysia, Indonesia, and Thailand; the latter includes India in the first place (Chen and Huat, 2007). In this dissertation, the concept "Eastern cultures" is used to refer to the geographic area of East Asia. Singapore has been included because Chinese form ethnically the overwhelming majority of population in this country (Chen and Huat, 2007).

Main differences between the Western and Eastern cultures can be analyzed in the light of the cultural dimensions presented in the former chapter. The dimension of high vs. low context is a clearly separating factor: most Eastern cultures are high-context societies, whereas most Western cultures have low-context characteristics (Hall, 1976; Mattila, 1999). Also the dimension of individualism vs. collectivism is important because Eastern cultures show characteristics of collectivism. A high power distance is linked to collectivism; accepting hierarchal structure and preserving harmony are motivators to enable a stable society (Hofstede, 1980; Becker, 2000; Ramaseshan, 2006). As regards communication, direct opinions are often linked to the fear of "losing face" in Eastern cultures (Ueltschy et al., 2007). (Even though Western cultures generally differ in the communication style, a similar concern is identifiable in the observation that indirect communication maintains the partner's public image – Gudykunst et al., 1988). Finally, Hofstede points out two dimensions that separate the Western and Eastern cultures: uncertainty avoidance and time perspective. He claims that uncertainty avoidance is a uniquely Western dimension that supports the search for "one truth" in the society (Hofstede and Bond, 1988). On the other hand, long-term orientation is a uniquely Eastern dimension to search for "virtue" in the society (Hofstede, 1991).

According to Hofstede, the dominance of Christian religion in the West has promoted the search for one truth (Hofstede and Bond, 1988). Christian religion deviates from Eastern religions – Confucianism, Buddhism, Taoism, and Shintoism – which consider that a partial truth does not exclude other truths (ibid.). A practical implication of this "philosophical" difference is that Westerners are inclined to consider various issues on the "either-or" basis, whereas Asians foster a more dialectical thinking and change their minds in the "both-and" context (Fang, 2010). In metaphoric terms, Asians accept the existence of both "white" and "black" simultaneously and allow the context and time to determine what will be appropriate (Fletcher and Fang, 2006).

As a bridge to the next discussion about the Chinese business culture, the current stage of global interaction deserves attention. In the aftermath of recent economic crisis, business reality has transformed from "the West leads the East" to "the West meets the East" (Chen and Miller, 2010). The rising economies in Asia have generated increasing business communication between the West and the East in the globalization context (Wang et al., 2012). China, which represents a typical Eastern culture in Asia, is nowadays the second largest economy in the world (Cai, 2010). It has a dominant impact on East Asian culture due to both its current role and its long history

(Chen and Huat, 2007). The Chinese culture can function as a fruitful source in international partnerships if the cultural differences are mutually understood (Chen and Miller, 2010).

2.3.3 Chinese business culture and its implications for services

It is difficult to examine cultures by asking people how they understand the central features of their culture. In China, the long history and heritage – and the "both-and" mindset – make the situation particularly complex: cultural characteristics depend on the situation, context and time (Fang, 2010). In addition to research, difficulties arise in practice. Especially foreigners conducting business in China become confused when they meet the local mix of cultural and contextual characteristics. In this chapter, the peculiarities of the Chinese culture are examined in Fang's (1999) framework which summarizes these peculiarities in two fundamental components: *socio-political situation* and *the long tradition of Confucianism*. The implications of these components to business (particularly service business) are discussed within this framework. The cultural dimensions identified in the earlier chapters are referred to when a linkage is identifiable.

China's socio-political situation refers to the distinctive characteristics of the contemporary societal and political system of People's Republic of China. These characteristics influence the behavior of people both in the daily life and in the business practices (Fang, 2006). The socio-political situation includes several variables: politics, the socialist planned economy, rapid change, great size and uneven development, technology development, bureaucracy, and the legal framework (Campbell and Adlington, 1988; Child, 1990, 1994; Porter, 1996; Fang, 1999). Next, the impacts of these variables are elaborated from the viewpoint of service business.

The influence of politics on services can be traced back far to the history in China. Feudal governments dominating the society in early times ranked the societal status from high to low classes (Liu, 2009). Service employees represented the lowest rank without honor and respect (Edvardsson et al., 2005). The situation did not change much before the modern times. A radical change took place when China became a socialist country in 1949; since then, the country has developed under Communist Party's ruling. During thirty years, the attitude towards services was that they are a sector that reflects the values of capitalism. Low price of services combined with non-incentive policy was characteristic until the social and economic reform was implemented in 1978 (Liu, 2007). After that reform, the business environment has been more favorable, but the former impact still exists to some degree (Fang, 2006). Due to its pervasive influence on every aspect of life, politics cannot be separated from the social system in China (Fang, 1999).

The socialist planned economy is linked to communism. During the years after the reform, the industrial structure has been decentralized. However, key industries (e.g. telecommunication, energy and mining) are still under the governmental control and not open to foreigners (Fang, 2006). Originally, these industries were dominated by state-owned enterprises (SOEs). Nowadays, this dominance has diminished as many SOEs have been sold and become privately owned enterprises (POEs). However, SOEs are still significant because of their size – privatization has concerned small- and medium sized enterprises (Qian and Wu, 2003; Ralston et al., 2006). The end result is that the shares of SOEs and POEs are very different in terms of the number of enterprises compared to their share of the gross industrial output. SOEs form only 5% of all enterprises while the share of POEs is 60%. However, the contribution to the gross industrial output is the same: 30% in both SOEs and POEs (China National Statistics Bureau, 2012 – an analysis in which micro-companies are not included). Foreign-owned enterprises (FOEs) form 27% of the gross industrial output and 18% of the enterprises (ibid.). FOEs permeated China's industrial economy along with the "open door" policy, which was linked to the general reform policy and included preferential treatment of foreigners (Studwell, 2002; Ralston et al., 2006).

The economic development in China has been rapid: the country has witnessed miraculous achievements in the past three decades (Zheng et al., 2009). During the 2000s, the average economic growth has exceeded ten percent every year (China National Statistics Bureau, 2011). The economic reform and growth bring the Western life style to China, and changes the business environment of services in particular: demands from customers increase rapidly. On the other hand, the change challenges the dominant ideology and traditional cultural values (Fang, 1999).

The implementation of the reform policy has been regionally uneven in China (Ralston, 2006). The Eastern part is developing much more rapidly than inland areas – in general and in terms of service business. On the other hand, a regional approach and regional segmentation are needed in any case because of the huge size of the country: different regions have their own business characteristics (Cui and Liu, 2000; Fang, 2006). For example, the business styles in Beijing, Shanghai, and Guangdong differ from each other. In Beijing, the style can be characterized as relational, in Shanghai it is professional, and in Guangdong entrepreneurial (Fang, 2005).

In the area of technology, learning from the West in order to improve people's living standards was one of the reasons why China opened its economy in 1978 (Fang, 1999). However, many Chinese companies have only copied Western technology and neglected the cultural aspects that impact on business practices (Liu, 2009). Consequently, the technological gap has been narrowed between China and Western countries, but the gap in carrying out (service) business is still large.

As a common feature in transition economies, bureaucracy is characteristic of China. The government intervenes in private business in many ways, e.g. via taxes (Guriev, 2004). The approval of business initiatives may require a long process at various levels of governmental departments with long waiting times (Fang, 1999). Close relationship with governmental officials helps overcome bureaucracy and may lead to efforts to get preferential treatment (Guiheux, 2006). The ability to form an alliance with the partners who have such relationships is often critical for success in China (Krug, 2004). It is especially crucial for service business due to its immature regulation with a space to deal. The positive aspect is quick decision making if one's products or services meet the government's priority or political requirements (Fang, 1999).

The legal system in China is still developing and human factors influence its implementation (Fang, 1999). The clause of laws is clear and transparent in most matters in which the mechanisms are intended to protect one's legal rights. However, there is vagueness in local regulations which leaves space for interpretation by local officers (Liu, 2007). Practices vary and may deviate from published laws and regulations – also regarding the issues that influence service business (ibid.).

The other fundamental component in the Chinese society – the long tradition of Confucianism – is a fundamental philosophical thought of moral ethic and human relationships (Tu, 1984). Confucianism has shaped Chinese culture for more than 2000 years since it became the state ideology during Han Dynasty. It met serious criticism in early Communist China, especially during the Culture Revolution in 1960s (Liu, 2009), but recently it has earned back its position. The Chinese government has even started to rebuild and emphasize Confucianism's central role in the policy document "The Construction of a Harmonious Society" (Liu, 2009). Confucianism includes five basic values: moral cultivation, family orientation, respect of hierarchy, harmony, and interpersonal relationships. The last one includes "guanxi", "renqing" and "mianzi" (Tu, 1984; Bond and Hwang, 1986; Hofstede and Bond, 1988; Child and Markoczy, 1993; Fang, 1999, 2006).

Moral cultivation maintains the idea that people entrusted with power and responsibility are supposed to show high moral and act as an example to educate their peers and others (Greer and Lim, 1998). It explains why human factors are often more influential than regulations in China. It also reflects the role of particularism and its linkage to the underdeveloped legal system in the country (Trompenaars, 1996). Local governors can interpret various principles according to their own understanding and benefits. This may compensate the immature legal framework in the Confucian "spirit", but confuses foreigners as the gaps between laws and practices are apparent (Liu, 2007).

Family orientation is an important social and also economic factor in China (Arias, 1998). Families have carried much of the social responsibility (e.g. welfare services) during the history and compensated the lack of public systems (Fang, 1999, 2006). Consequently, there is a huge number of domestic privately-owned enterprises (POEs) running businesses in a family style (Ralston et al., 2006). The founder's spouse, children and close relatives have often been working in the same firm as a big family (ibid.). The diffuse culture in Trompenaars' (1996) categorization corresponds to the situation in China: business is integrated with family life. Family orientation is also linked to the collectivist nature of the Chinese culture (Hofstede, 2001): the group interests are more important than individual benefits.

Hierarchy is emphasized in Confucianism together with the rights and duties attached to the roles at each level (Greer and Lim, 1998). The roles are based on age and past experience, which indicates that “ascription” is included in Confucianism (Bell, 2010; Trompenaars, 1996). Although social hierarchies exist in all large-scale societies, the Chinese system shows higher power distance than Western cultures (Hofstede, 1991): unevenly distributed power is accepted in society and business. A practical consequence in service business is the small emphasis put on the empowerment of employees and proactive offering of services (Gebauer et al., 2007).

The aim of Confucian philosophy is to avoid conflicts and to achieve harmonious society (Fang, 1999). This ideal is visible in various principles, regulations and practices in the Chinese business and social life (Wang and Juslin, 2009). It also answers the current challenge of balancing the rapidly growing economy and its negative effects (Li et al., 2004). An illustrative example is the governmental goal of promoting sustainable development, which is included in the 12th Five-Year (2011-2015) Plan (NDRC, 2011). However, interests of some enterprises may be sacrificed in order to meet the needs of the majority. The cultural features of collectivism and long-term orientation are visible here; short-term orientation is however common in the economic transition (Tan, 1996).

Interpersonal relationships in China are closely connected to the Chinese word “guanxi” (Davies et al., 1995). It is a way to demonstrate one’s position or role within social networks, thus providing security and trust (Hammond and Glenn, 2004). Based on “guanxi”, an individual can secure resources and gain advantages when doing business (Davies et al., 1995). Although the Western concept of networking is inherent in the concept of “guanxi” (Davies et al., 1995), the context is different; “guanxi” cannot be simply translated into “interpersonal relationships”. “guanxi” works through “renqing” and “mianzi” (Hwang, 1987). “Renqing” describes reciprocity and exchange of favor: the one who accept “renqing” from the other is expected to pay it back in certain ways when needed (Davies et al., 1995). “Mianzi”, so called “Chinese face”, refers to enhancing individual’s social status or preserving one’s dignity (Gebauer et al., 2007). It means respect and recognizes the status and moral reputation of a person (ibid.). In China, it is very important to avoid “losing face”, which denounces the status. One should also aim at “giving face”, which raises the reputation of collaborators in the “guanxi” network. Consequently, Chinese people feel obligated to offer “renqing” as assistance and save business partners’ “mianzi” to maintain “guanxi” (Yang, 1994). At the same time, those partners are also expected to reciprocate “renqing” in one or other ways to maintain trust and long term cooperation (ibid.).

The process of building and maintaining “guanxi” also reflects the long-term orientation in the Chinese business culture. In the service context, it implies that providers aim to establish long lasting relationships with customers (Liu et al., 2001). This may lead to free of charge services during the product's life cycle. However, Chinese companies also offer "free" services as "renqing" to build "guanxi" with customers. If a customer expects services for free, service managers in the provider company feel that they lose "face" by charging those (Gebauer et al., 2007). (Another reason for free services is the same as in the West: to support customers' buying decision (Yang and Peterson, 2004).)

Because markets in China are still taking shape and the institutional set-up is limited, "guanxi" networks help companies gain information about business opportunities and improve efficiency (Fock and Woo, 1998). On the other hand, along with the rapid development, the legal framework is improving and the whole country is becoming more integrated into global economy. Consequently, it is expected that the impact of "guanxi" will remain but have less influence in the future (Vanhonacker, 2004). Understanding "guanxi" is necessary but not sufficient to achieve business success in China (Fan, 2002). Even good "guanxi" cannot replace a well-organized business plan, without which business in China will be very risky (Fan, 2002; Vanhonacker, 2004).

2.4 Summary of literature review

The literature review covers the three theoretical parts of the dissertation: service economy and service business, internationalization of services, and the implications of cultural differences on services. The first part presents different meanings of the concept "service". This dissertation applies the view of services as offerings (products), but also briefly touches the interpretation of services as co-created value. Services have also been analyzed as an economic sector or as part of the manufacturing and technological sectors (Carlborg et al., 2014). The "synthesis view" on services brings to the fore the importance of the convergence between manufacturing and services (Djellal and Gallouj, 2013). The phenomenon of "servitization" describes manufacturers' transition from the selling of goods to the offering of industrial services (Vandermerwe and Rada, 1988; Gebauer and Fleisch, 2007). Within the various categorizations of industrial services, this dissertation applies the recent division of Turunen and Toivonen (2011): services supporting the product (SSP), services supporting the customer's processes (SSCP), and services supporting the customer's business (SSCB). Moreover, services have a prominent role in the knowledge economy, in which a change from manufacturing based to services driven business is a central phenomenon (Kuusisto and Meyer, 2003; Powell and Snellman, 2004). The rapid growth of knowledge-intensive business services (KIBS) is one of the marking trends towards the knowledge economy (Müller and Zenker, 2001). KIBS are innovation oriented, carrying out both internal and external innovation activities in cooperation with their clients (cf. den Hertog, 2000). Creative KIBS, one of recently emerged KIBS categories, is a part of creative industries, which is often intermingled with cultural industries (Hesmondhalgh, 2008; Miles, 2011). The innovation capacity of cultural and creative industries intersects the innovation processes of other manufacturing and service sectors with innovative and creative inputs and outputs (Cooke and De Propris, 2011). This innovative role corresponds to the role of KIBS (Müller et al., 2009). Deviating from KIBS, cultural and creative industries also include manufacturing activities and material elements (Caves, 2000). An important new KIBS sector is services that support the promotion of sustainability. The role of KIBS is increasingly important in the visioning and planning of solutions in terms of economic, environmental and social sustainability (De Sousa, 2006; Mohamed et al., 2009; Yigitcanlar, 2009). Sustainability is also considered as a key external driver for servitization. The theoretical part of this dissertation provides the basis for analyzing all these service categories: industrial services, KIBS, services linked to creative industries, and services linked to sustainability.

Although the international investments in services have already surpassed those in manufacturing, research on the internationalization of services is still lagging behind the respective research on manufacturing (UNCTAD, 2004; Apfelthaler and Vaiman, 2012). The second theoretical part tackles this issue and reviews literature about the internationalization of services. Generally, there are three main forms to operate in international markets: foreign direct investments (FDI), exports, and foreign presence through third parties (Vandermerwe and Chadwick, 1989; Sondheimer and Bargas, 1993). These forms are all applicable in the service context but require some specification. The balance between risk and control is an important factor for service companies in the selection of the suitable form of foreign presence (Glückler, 2004). Two main paths in entering the foreign markets are following a client or internationalizing independently. Following a client can help service companies to reduce the risk of internationalization, whereas an independent path is a more proactive way to seek attractive markets (Cicic et al., 1999). The latter approach includes two additional options: gradual (stepwise) internationalization and rapid internationalization. Cautiousness in gradual internationalization leads to preferring a short "psychic distance": starting the international operations in countries that resemble domestic markets. On the other hand, there are an increasing number of "born global" companies which are originally founded to be international. Service companies may also combine several paths – they do not exclude each other (Majkgård and Sharma, 1998). In addition to the selection of the basic form and path in foreign markets, the business model and positioning in the value chain are important elements in an internationalization strategy (Morris et al., 2005). The feasibility of the business model in the target market is the prerequisite of success. The movements of companies along the value chain have been conceptualized as shifts of the "value offering point (VOP)": the point where the supply and demand chains of the provider and the client meet (Holmström et al., 1999). In the conventional product and service business, VOP is based on fulfilling customers' orders. In the more advanced business, "offer to planning" is a proactive way to analyze how the customer demand can be met. Moreover, service providers, KIBS companies in particular, can have the role of an integrator that combines various activities and resources and bridges different stakeholder groups in the value networks (Windrum, 2002).

Cultures are influential in the internationalization of services (Samiee, 1999). Cultural differences between the home and host markets may lead to higher uncertainly avoidance in services than in manufacturing due to the close interaction between service providers and customers (Kogut and Singh, 1988). However, the studies on the impacts of cultural differences are scarce in the service context. The third theoretical part targets the issue of cultural differences and analyzes their implications to service business. This part reviews first various cultural dimensions. It starts from the communication-based models of Hall (1976), Glenn (1981) and Levine (1985), and continues to the multidimensional models of Hofstede (1980, 1991) and Trompenaars (1996). The general impacts of these models on service practices are opened up. Next, the characteristics of Western and Eastern cultures are compared in the light of cultural dimensions. Based on literature, most Western cultures can be characterized as low-context, individualistic, and having a low power distance. On the other hand, most Eastern cultures can be characterized as high-context, collective and having a high power distance (cf. Hall, 1976; Mattila, 1999; Becker, 2000). Uncertainty avoidance is a unique Western feature and reflects the search for "one truth"; whereas long-term orientation is a unique Eastern feature and reflects the search for "virtue" in the society (Hofstede and Bond, 1988; Hofstede, 1991). The theoretical part ends up with an analysis of the specificities of the Chinese business culture – the context of this dissertation. It has been described using Fang's (1999) framework about two fundamental components of the Chinese society: socio-political situation and the long tradition of Confucianism. The former highlights the distinctive characteristics of the contemporary societal and political system of People's Republic of China, such as the socialist planned economy, rapid change, bureaucracy, and the immature legal framework. The latter describes the fundamental philosophical thought in China and includes several basic values: moral cultivation, family orientation, respect for hierarchy, and specific "rules" of behavior in interpersonal relationships ("guanxi" in particular) (cf. Tu, 1984). The implications of these values to service business and their linkages to different cultural dimensions have also been brought up.

3 Design and methodology of the empirical studies

3.1 Qualitative research and the case study approach

Qualitative research and case studies were chosen as the approach in this dissertation. This research strategy is suitable when the aim is to discover contemporary patterns and practices of real-life settings in an exploratory way (Yin, 2003; Gephardt, 2004). Qualitative research concentrates on actors in their relationships and activities, considers phenomena as unfolding processes, and is based on narratives with situational details (Gephardt, 2004). Although qualitative research implies certain subjectivity in explaining the phenomena, it enables deep understanding of evolving and changing situations (Eisenhardt and Graebner, 2007). A basic requirement of qualitative research is to interpretively transform the data collected in a narrative way to reasonable results (Sandelowski and Barroso, 2003). "Access to reality" is the most crucial element of good qualitative research, but also the most difficult to realize (Gummesson, 1991).

In an intercultural context, consciousness of the way in which the behavior of the researcher affects the results is crucial. Many cross-cultural studies have neglected this issue in research designs, and rarely discussed it in reporting the results (Tsang, 1998). When the study includes a comparison of very different cultures, the role of the researcher includes several challenges: research situations may require more flexibility than those encountered in a familiar context (Vallaster, 2000). It is basically intuition and flexibility that guide the researcher in balancing between the "formal vs. informal" role (Arksey and Knight, 1999; Rubin and Rubin, 2011). In the Chinese culture flexibility in this regard is a necessity in order to have access to the essential information (Tsang, 1998). A great benefit is if the researcher has experience of the different cultures involved in the study (Vallaster, 2000).

Case studies are particularly appropriate for exploratory purposes in the context in which the investigator has little or no control over the events (McDermott, 1999; Woodside et al., 2003). A generally used definition describes a case study as "*an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident*" (Yin, 2003, p. 13). Case studies are often applied to gain a holistic view on events and occurrences and to understand the complexity of phenomena (ibid.). It is important to note that description is not enough, but in-depth analysis is needed to provide leverage for increasing the evidence and the validity of theory (Levy, 2007). Case studies play a useful role in the development, refinement and testing of theories (ibid.). As generally in qualitative studies, the subjectivity of interpretation is a weak point; "empathic neutrality" has been suggested as a suitable practice to handle this problem (Patton, 1980). This means that objectivity in the data collection and analysis should be pursued, even though it is impossible to avoid the impact of the researcher's experience and expertise (Rowley, 2002).

Case studies may adopt *single-case or multiple-case designs*. A single case study is appropriate when the case reveals an important phenomenon. Single cases provide in-depth investigation and rich description. Multiple-case designs allow cross-case analysis and comparison, and the investigation of a particular phenomenon in diverse settings (Darke et al., 1998; Yin, 2003). Here, different cases are considered as distinct units to find patterns and relationships across cases (Eisenhardt and Graebner, 2007). Multiple case studies improve analytical generalizability of the research results (Lincoln and Cuba, 1985; Kvale, 1996), but also a single case can be employed to test theories (George and Bennett, 2005). The selection between multiple and single case studies has an impact on the research process: a single case study can iteratively reflect the direction of the study based on findings, whereas multiple case studies usually have to follow a preset structure to be comparable (Aaboen et al. 2012).

In this dissertation, the studies on industrial services and KIBS apply a multiple case study approach. In these studies, focusing on established service sectors, we were able to find a sufficient number of comparable Nordic companies that carry out or plan business activities in China. The studies on creative industries and sustainability issues rely on single cases. The number of Nordic actors is much smaller in these new fields, and our aim to find companies that offer an illustrative case restricted the available options further. In order to compensate the lower generalizability, the opportunity for a deep analysis was seized. The analysis of Chinese concepts (e.g. "cultural creative industries") played a significant role in these studies and supported the empirical exploration (cf. Deng, 2006). The original literature (Appendix 1 A) applying Chinese concepts and written by local scholars in the Chinese language is worth mentioning in particular; it aimed to contribute the earlier Western studies with novel insights (cf. Gu, 2013).

3.2 Cases and their relation to the themes of the dissertation

Justifying the selection of cases on the basis of theoretical criteria has been highlighted in the methodological literature (Levy, 2007). Explicit research questions help to construct research designs to maximize their theoretical leverage (ibid.). The research questions formulated for each specific study have guided the selection of cases in this dissertation, too. Within the practical limitations mentioned in the former chapter (the presence of Nordic companies in China), the studies have applied the principles of theoretical sampling. Each case has been selected on the basis of its ability to reproduce or extend theoretical views (Eisenhardt, 1989). The theoretical views included in this dissertation concern specific service sectors (industrial services and KIBS) and emerging new topics linked to services in China (creative industries and sustainability).

The studies have been carried out in two projects: industrial services were studied in the first project and all the other topics in the second project. The first project was part of a research program "Future Industrial Services (FutIs)" 2011-2012. The program was an activity of Fimecc Ltd – a Strategic Centre for Science, Technology and Innovation (SHOK) in the metals and engineering industry. SHOKs are an innovation policy instrument in Finland, operating in various industrial and service sectors and being built on public-private partnerships. The second project was part of the "Serve" program of Tekes (The Finnish Funding Agency for Innovation) 2012-2014. The project was titled "Branding of Finnish Service Concepts in China and Far East (SerFinChi)".

In the first project (part of the "FutIs" program), the case companies were all Nordic manufacturers in metals and mechanical engineering. They represented installed base manufacturing, selling first machinery and equipment and thereafter offering services to maintain them and to help the customer use them effectively. Five case companies (four Finnish and one Swedish) were selected for the study. They differ regarding the scale and development of service business in China, which created possibilities for generalization and comparison in the study. It was important that each of them had a specific market focus – thus, they were not mutual competitors and were willing to share views in open discussions. These five companies provided the material for the analyses in Article 1.

In the second project "SerFinChi", the sample consisted of three KIBS companies (two Finnish and one Swedish). All of them were technologically oriented, representing clean tech engineering, architectural design, and 3D solutions in digital media. The engineering and architectural companies had established business in China. The 3D company – which actually represented an intermediary form between KIBS and creative industries – had planned entering this market. All three companies provided material for Article 2 which focused on the topics of the internationalization strategies and positioning in the value chain. The 3D company also reflected specificities of creative industries and was used in Article 3 to illustrate a Western player's proactive activities in seeking business opportunities in this field in China. Correspondingly, the architectural company was an illustrative example of activities in the area of sustainability. It provided material for Article 4 to describe the participation of Western actors in the development in Chinese eco-cities. Thus, the experiences of the 3D company and the architectural company were used for two purposes: for Article 2 on the one hand, and for Article 3 (the 3D company) or Article 4 (the architectural company) on the other. The perspectives were, however, quite different. Article 2 discussed issues linked to general business strategies, whereas Articles 3 and 4 concentrated on specific contents-based topics. In addition, some new material and a few additional interviews were acquired for Articles 3 and 4.

Table 3 summarizes the methodological choices of this dissertation – multiple and single case studies – and relates the cases to the research themes and articles. It also refers to the projects which have formed the framework for the research.

Table 3: Methodological choices and the relation of cases to the different themes of the articles

Articles	Theme	Method	Case description	Project
Article 1	Servitizing manufacturing	Multiple case study	Five cases in metals and mechanical engineering	Project 1 (FutIs, 2011-2012)
Article 2	KIBS	Multiple case study	Three cases in clean tech engineering, architectural design, and 3D solutions	Project 2 (SerFinChi, 2012-2014)
Article 3	Creative industries	Single case study	One case in 3D solutions focusing on digital media	
Article 4	Sustainability	Single case study	One case in architectural design focusing on eco-cities	

3.3 Data collection

The primary data was gathered mainly via interviews; however, participation and discussions in the topic-related seminars and exhibitions were an important additional way to get first-hand data. The secondary data consisted of governmental documentation, the companies' website (archival) data, the companies' internal reports, and original Chinese databases.

Interviews were mainly carried out face-to-face in order to get in-depth opinions from the respondents (cf. Kvale, 1996). However, in the first project, telephone interviews were also used due to practical reasons (the author of this dissertation mainly stayed in Finland that time, having only a short visit in China to interview some case companies and their clients; longer visits were mainly possible during the second project). The work started with inviting companies to join the projects (via an email, phone call or a visit). After the commitment, the company representatives in the projects helped finding suitable interviewees within the company and among its clients and partners. The recommendations and introductions given were invaluable: without them it would not have been possible to interview the representatives (often top management) of these companies in China. The first interviewees introduced new contacts, including the customers. Thus, our studies followed the snowball method in sampling (Arksey and Knight, 1999). The number of the interview varied between the case companies due to the nature of the company's size, support, and activities in China.

The interviews were semi-structured: a list of topics with open-ended questions was prepared based on the research questions and the literature review. The original Chinese literature (Appendix 1 A) also helped to organize the topics. This literature includes English titles and abstracts, but the main contents are in the Chinese language. The length of the interview varied between one hour and one and half hours. Following the advice of Arksey and Knight (1999), the interview sessions were kept flexible and open in order to tackle the emergent and changing phenomena in the real life setting and to gain personal and diverse responses from various interviewees. Most interviews were recorded with the interviewees' permission. The specific context of the research made recording particularly important: it was not possible to organize all interview sessions in a quiet place. For example, some interviews were conducted in cafeterias, and some even in factory areas. Recording helped ensure the accuracy of results and transcribe and analyze the interviews. The ambiguous and conflicted answers were checked, commented and confirmed by the interviewees. (This usually took place by phone as Chinese managers prefer to solve problems immediately via a phone call – email exchange is not frequent in local companies.) Also the steering group meetings of the projects, held quarterly, were used for the feedback acquisition: in these meetings, the interview results were presented in a summary form.

Trust has a major influence on whether the interviewees genuinely express their opinions (Vallaster, 2000). Meeting the interviewees in person is as such a trust building practice. However, cultural specificities pose additional challenges. In China, trust is linked with the "face" culture. Some interviewees may pretend to be more knowledgeable in the interview topic than they actually are in order to maintain their face, or they may tell what they believe the interviewer to wish as a means of enhancing the interviewer's face (Roy et al., 2001). It is also very important to convince the interviewees that their answers will be kept anonymous; otherwise, they hesitate to provide critical comments. In order to take into account the specificities of the Chinese culture, this and other local habits were utilized to develop a good relationship with the interviewees. Discussions outside the interview sessions (e.g. during the lunch or tea time) provided an opportunity to build trust and also get useful extra information on the research topics. Deviating from the Western interview practices, it is also normal to give some small gift at the end of the session. This facilitates the acquisition of supplementary information, among others.

The interviewees in the study on industrial services represented the general management and service management of the case companies; both Chinese and Western managers were interviewed. The study was supplemented with a few interviews among the customers of the case companies in China; these interviewees were all Chinese. Customer interviews are exemplary in nature but illustrate the buying behavior in different regions and in the companies of different ownership types in China. The interviewees in the KIBS studies represented top management of the case companies. In these studies – particularly in the studies on the creative industries and the sustainability topic – the participation in related seminars and exhibitions in China generated important additional insights. It offered the opportunity to communicate with many experts, and (potential) partners and customers of the case companies. The discussions with these stakeholders provided a broader picture of the KIBS business in various fields. In the early stage, they also helped refine the interview outline, and later on opened doors for further interviews.

Methodological literature has emphasized the collection of secondary data (besides the primary data) in order to carry out effective and valid research; secondary data has been considered important in the exploratory phase of cross-cultural studies in particular (Malhotra et al., 1996). In this dissertation, the secondary data was used to build understanding of the case companies' business at the general level, and verify the primary data derived from the interviews.

Both governmental and company documents were used as secondary data. Governmental data consists mainly of the most recent "China Statistical Yearbook" and the policy guidance documents "Five-Year Plans". The Chinese governmental data suffered earlier from the problems of inaccuracy, poor reliability and weak representativeness, but nowadays the situation has improved (Roy et al., 2001). Company data included public website data on the one hand, and internal company documentation on the other. In the study on industrial services (Article 1), the group level website data was abundant as all the case companies are public: they publish regularly annual reports and news. However, documentation and data concerning the Chinese market was difficult to find; the local subsidiaries do not publish this kind of material due to the business sensitivities and secrets. To some extent, this data was made available by the case companies themselves. Two of them (named with the acronyms ALPHA and BETA) provided internal documentations – "China subsidiary service offering reports" – with the percentage share of each service type in the total offerings. From the other three cases in industrial services, only qualitative company-specific data was available concerning the different service categories. In the studies on KIBS (Articles 2, 3, and 4), internal documentation besides the website data was available from two case companies. The 3D solutions company provided its "Service portfolio report" and the architectural company its "Project export report 2008-2011" for the use in this dissertation.

Literature sources are not usually included in the actual data of an academic study. However, in this dissertation – in the studies on servitization, creative industries and the sustainability topic in China – the possibility of using the original Chinese literature (Appendix 1 A) was so important that it is reasonable to mention it as a specific type of "secondary data". The database used was China National Knowledge Infrastructure (CNKI: http://www.cnki.net/).

Table 4 summarizes the empirical data of the case studies. In order to secure the anonymity, the cases in Article 1 (all of which represent metals and mechanical engineering) are referred to with acronyms ALPHA, BETA, GAMMA, DELTA and EPSILON. The KIBS companies need not such acronyms because they are separable based on their business sector.

Table 4: Summary of the empirical data in the articles

Articles	**Case companies**	**Primary data**	**Secondary data**
Article 1 (data collected during 2011-2012)	Finnish manufacturer ALPHA	9 interviews:2 Finnish & 1 Chinese general managers, 1 Finnish & 2 Chinese service managers, 3 Chinese customers (1 general manager & 2 service manager)	Governmental documentation: China Statistical Yearbook (2011, 2012, 2013), China 11^{th}/12^{th} Five- Year Plan (2006-2010/2011-2015); Company's public website data, annual report; China subsidiary service offering report (ALPHA & BETA's)
	Finnish manufacturer BETA	11 interviews: 2 Finnish & 1 Chinese general managers, 2 Finnish & 2 Chinese service managers, 4 Chinese customers (1 general manager & 2 service manager)	
	Finnish manufacturer GAMMA	5 interviews:1 Finnish & 1 Chinese general managers, 1 Finnish & 1 Chinese service managers, 1 Chinese customer (service manager)	
	Finnish manufacturer DELTA	3 interviews: 1 Finnish general manager, 1 Chinese service manager, 1 Chinese customer (service manager)	
	Swedish manufacturer EPSILON	4 interviews: 1 Swedish general manager, 1 Swedish & 1 Chinese service managers, 1 Chinese customer (service manager)	
Article 2 (data collected during 2012-2013)	Finnish clean tech engineering company	5 interviews: 3 Finnish & 2 Chinese managers, 1 seminar	Company's website data; project export report 2008-2011 (architectural company's); service portfolio report (3D company's)
	Swedish architectural design company	4 interviews:2 Finnish & 2 Chinese managers, 1 seminar	
	Finnish 3D solutions company	3 interviews: 3 Finnish managers, 1 seminar	
Article 3 (data collected during 2012-2014)	Finnish 3D solutions company	9 interviews: 3 Finnish managers, 6 Chinese partner representatives, 2 seminars & 3 exhibitions	China 11^{th}/12^{th} Five-Year Plan, local industry report; company's website data; service portfolio report
Article 4 (data collected during 2012-2014)	Swedish architectural design company	5 interviews: 1 Finnish & 1 Chinese managers, 1 Finnish & 1 Chinese partner representatives, 1 Chinese governmental customer, 2 seminars & 2 exhibitions	China 12^{th} Five-Year Plan; company's website data; project export report 2008-2011

3.4 Data analysis, reliability and validity

Cross-cultural research consists of an analysis of meaning that does not exist independent of people's interpretations and understanding (Alasuutari, 1995). It is therefore necessary to listen carefully to the statements and explanations of interviewees and send the transcribed notes to them for cross-checking in order to prevent any misunderstandings (Vallaster, 2000). An important difference between Western countries and China is the direct vs. indirect communication style. The statements of Chinese interviewees are often implicit and indirect, whereas Western people express themselves more explicitly and directly. The cross-cultural background of the author – a native Chinese studying and working in Western countries for many years – helped to appreciate the significance of this issue: all the ambiguous points were checked with the informants after the interviews.

Data analysis involves a subjective interpretation of the collected data through a systematic classification process of coding in order to identify reasonable themes or patterns (Hsieh and Shannon, 2005). The categories can be derived directly from the data or a theory can be used as guidance for the initial coding (ibid.). In this dissertation, a coding tool was not used but the interview material was analyzed in a systematic dialog between the theories and data. In each individual study, the transcripts of the interviews and the documentations were categorized into central themes. The lists of interview topics (and the Western literature, the Chinese scientific literature, and the research questions as their background) guided this work. For example, the study on industrial services (Article 1) applied a three part categorization of these services (Turunen and Toivonen, 2011). This categorization was the basis when the interview results were analyzed, and it worked well in the case of Western manufacturers in China.

However, due to the open nature of the interview method, some themes were more emphasized than others in the interviewees' answers which led to the need of restructuration. In the first two studies, answers concerning each theme were compared across the case companies. Similar and different opinions were also identified between the providers and customers. Interesting new findings were taken for further analysis and compared with the literature. In the last two studies, the earlier literature played a particularly important role in the analysis of the empirical findings because of the emerging nature of the topics. The original Chinese literature (Appendix 1 A) supplemented Western literature and provided a local perspective to the Chinese specificities in creative industries and in the eco-city design.

Reliability and validity are important to ensure the quality of case study research (Yin, 2003). Reliability refers to the consistency of results: the data collection procedure can be repeated with the compatible result. It depends on the questions asked in interviews, on the transcription process, and on the coding process (Kvale, 1996). A case study protocol and database can be used to improve reliability (Yin, 2003). In this research, a systematic protocol meant the outlines of the interview topics, which were formulated based on the research questions and the literature review. They covered all the important themes of the individual case studies. The research material compiled ("the database") has been made transparent. It consists of archival data and documentation of the case companies and governmental stakeholders, research diaries, notes from seminars and exhibitions, transcribed interviews, and the feedback from the interviewees. The transparency of the data enables further analysis and enhances the possibility that other researchers with a similar skills and background (regarding the culture, education, experience, and so on) can achieve consistent results if they conduct a similar study.

Validity includes several types. Construct validity, internal validity and external validity are the three classical forms (Yin, 2003). Various scholars have emphasized these forms somewhat differently in the context of qualitative and case studies. Stuart et al. (2002) have claimed that construct validity and internal validity are the primary concern in case studies. Levy (2007) has noted that qualitative researchers put more weight to internal validity, whereas quantitative researchers pursue external validity. In this research, all three validity tests have been considered necessary, following the argument of Yin (2003). The way in which they are applied in the data analysis is briefly summarized in the following.

Construct validity concerns the extent to which the exploration reflects the phenomena it is targeted at (Stuart et al., 2002). It emphasizes the correspondence view: the results should be based on the "objective reality" (Kvale, 1996). In order to secure construct validity, it is critical to operationalize carefully the concepts being studied. In this study, this basic prerequisite was pursued via the process that focused on the meanings of the central concepts used in the Chinese business practice (cf. Bagozzi et al., 1991). Construct validity was also pursued via the use of multiple sources of evidence during the data collection process and the combination of this evidence during the data analysis (cf. Eisenhardt, 1989). Thereafter, a chain of evidence was established: the interesting, typical or even conflicting insights were identified in the first interviews, and they were followed up in the next interviews (cf. Yin, 2003).

Internal validity seeks to establish a coherent view and causal relationships (Yin, 2003). The identification of causal relationships was not possible in this dissertation due to its qualitative nature, but a coherent view has been strived for throughout. The theoretical literature has functioned as a framework for the empirical data analysis. The results concerning the impact of cultural differences on service business illustrate the way in which theoretical and empirical materials have supported each other. The interviews from Western and Chinese actors confirm the significance of cultural differences and provide insights to explain these differences. Several efforts were taken to secure the internal consistency and logic of the results. Guiding the interviews via list of topics but keeping the interaction open was an important practice in this regard: the interviewees were given a great freedom to answer open-ended questions. Similar, but also rival explanations were sought in the interviews. In addition to the same basic questions, additional questions were asked depending on the different backgrounds of the interviewees. Various topics, concerning the service business development, opportunities and challenges in China, were discussed to elicit new lines of thinking, to gain deep understanding, and to strengthen the logic of results.

External validity concerns the generalization of results from one case context to other situations (Yin, 2003). The use of replication improves the external validity: if two or more cases support the same theory, its logic is confirmed (ibid.). In this dissertation, the multiple case study approach was used to enhance the generalizability of the results; the first two studies applied this approach. The replication logic was visible: in the first study, all five case companies represented Nordic manufacturers in metals and mechanical engineering with the aim to develop service business in China; in the second study, three Nordic KIBS companies had the same aim even though they were at different stages in their internationalization to the Chinese market. The last two studies, applying a single case approach, are not generalizable on the basis of the empirical results, but the dialog between the theory and the case enables generalizable propositions for the future. Concerning all case studies, the discussions with business practitioners and academic researchers in the steering group meetings strengthened the validity and improved the theoretical contributions and managerial implications of the research.

4 Results

The present chapter summarizes the results of the four articles included in this dissertation. They concern specific service areas (industrial services and KIBS) on the one hand, and particular topics related to services (creative industries and sustainability) on the other hand. Each article answers one research question, tackling situational factors of services development in China. The results include both local specificities and business implications. However, the emphasis on these two aspects varies to some extent between the articles. The results are structured into the following topics (each discussed in one sub-chapter): industrial services in China, entering the Chinese KIBS markets, the emergence of creative industries in China, and the Chinese eco-cities (as the application of sustainability efforts).

4.1 Industrial services in China

Chinese manufacturing has servitized rapidly during recent years (Neely et al., 2011). Also many Western manufacturers have started to provide industrial services to their Chinese customers in order to offer added value during their products' life cycle. *Article 1* examines this phenomenon, focusing especially on the opportunities and challenges that Nordic providers meet in China. The results are structured in four parts: current development of Chinese industrial services, the success of different types of service offerings in China, the "guanxi" dilemma as a challenge and as an opportunity, and differences based on the ownership of client companies. The results in the first part are based on the original Chinese literature (Appendix 1 A) and the Chinese governmental documentation (Appendix 1 B). The results in the latter three parts are mainly based on the interviews and the companies' internal reports.

4.1.1 Current development of Chinese industrial services

Servitization in China is a new development, but its pace has been striking: in 2007, less than 1% of Chinese manufacturing companies had servitized, whereas in 2011, almost 20% of these companies provided industrial services (Neely et al., 2011). Before the year 2007, Chinese manufacturing firms mainly played the role of world factory and put only little effort on adding services to products. According to the original Chinese literature (Appendix 1 A), the Chinese policy focused on the implementation of low price services which prevented to find out the benefits of servitization (see also Liu, 2007). The recent dramatic growth shows that the problems of the former focus have been realized both among policy makers and among practitioners (ibid.). Chinese manufacturers now intend to move up the value chain, following the developed economies in the aim to offer high value products and services (Neely et al., 2011).

Based on the Chinese governmental documentation in both 11th Five-Year (2006-2010) Plan (NDRC, 2006) and in the 12th Five-Year (2011-2015) Plan (NDRC, 2011), the Chinese government has supported this intention by enhancing the competitiveness of manufacturing and by promoting the development of services. The government has aimed to accelerate the transformation of economic development, and induced manufacturers to adopt the servitization strategy (NDRC, 2006). Resource conservation, environmental protection and energy saving are manifestations of the new policy (NDRC, 2011). Subsidies, tax reduction and interest-free loans are provided to small and medium sized enterprises (SMEs) for their technology upgrading, energy saving and emission reduction (Li & Fung Research Centre, 2010).

In addition to the governmental intervention based on the new policy (NDRC, 2011), the economic situation has contributed to the sharp change (Neely et al., 2011). Exporting the manufactured goods has slowed; it decreased the revenue of Chinese manufacturing firms' during the financial crisis of 2008 in particular. The expansion of investments and domestic consumption contributed the majority of growth between 2008 and 2010 (China National Statistics Bureau, 2011). Also the strengthening of the Chinese currency in comparison with foreign currencies, and the rise of labor cost after a series of labor disputes, shrank the profits of Chinese manufactures (Zheng et al., 2009). They had no choice but to seek new profit growth by upgrading and transformation.

According to the original Chinese literature (Liu, 2007), the growth of servitization has led to tightening competition in China. Many local manufacturers have enhanced their capability of offering industrial services to domestic customers. Therefore, Western manufacturers face a more challenging business environment. On the other hand, the demand on industrial services is also increasing along with the increasing production of machinery and equipment. This offers Western manufacturers a potential to extend their service business in the Chinese markets.

4.1.2 The success of different types of service offerings in China

In this dissertation, industrial service offerings in China have been classified to three main categories described in the literature analysis (Chapter 2.1.1): services supporting the product (SSP), services supporting the customers' processes (SSCP), and services supporting the customer's business (SSCB) (Turunen and Toivonen, 2011). In quantitative terms, spare parts seem to be the most important type of SSP provided by Nordic manufacturers in China: in the case companies ALPHA and BETA, they account for more than 50% of the total service offering (based on the service offering reports of the Chinese subsidiaries of these companies). This focus corresponds to the customer demand: according to the interviewees, Chinese customers are more willing to pay for tangible products than for services. Customers usually do not store extra spare parts because they want to reduce the warehouse cost. They accept a premium price when an operation problem occurs: reducing the downtime as fast as possible will compensate the cost of spare parts. On the other hand, customers are actively looking for substitutions from local providers because spare parts of Western manufacturers are more expensive than those of local providers. The interviewed customers mentioned that the price set by foreign companies may be six to ten times higher than the price set by domestic providers, and it has been rising fast in recent years.

Customers also expect that manufacturers provide a full range of spare parts. They mentioned that currently some equipment has to be upgraded faster than is necessary because the providers do not supply the old spare parts or their price increases dramatically (30% annually). From the providers' perspective, the reason is in the problems of profitability as regards the installed base business. They cannot sell the machinery with a competitive price in the situation where the competition is high and customers are very price-driven. In some cases, providers are losing money in the installed base business and have to try to compensate it with spare parts and other services during the equipment's life cycle.

Services supporting the customers' processes (SSCP) include modernizations, inspections, and service agreements. In recent years, the last mentioned service has become especially popular. The agreement period varies from a few months to several years. An increasing number of Chinese customers are nowadays expecting this type of service due to two reasons: they lack competence in their own service team and they recognize that a long-term contract is more economical than separate services around the year. Although some customers have a capable service team and compete with providers based on the lower costs of their labor force, they may need external help in emergency services due to high financial losses of downtime. This offers an opportunity for Western providers: they can market agreements that emphasize emergency services. Step by step, customers may start to see the benefits of optimizing the production and quality as a way to save raw material and energy and to diminish big investments. The interviewees of Chinese customers pointed out that foreign providers need to localize their business faster – for instance, to utilize local labor force and in this way to reduce the prices.

Expert services and solutions represent the SSCB category: services supporting the customer's business. They are a way to answer customers' problems holistically and consultatively. Under the "solutions umbrella", various services are provided according to the customers' requirements and specific situations. The interviewed customers highlighted that customers will, however, compare the suggestions for solutions with the real market and carefully consider whether it is worth to invest in these types of services. In China, customers expect a short payback period even in the case of solutions: one year or less is typical, and usually a payback period of more than two years is not acceptable. Curious enough, a factor that seems to favor solutions is the importance of tangibility in the Chinese business culture. Solutions are attractive because they include material products besides consultative elements. This finding indicates *the possibility of moving directly to solutions from the business with tangibles* and questions the linearity of servitization. Although solutions business is embryonic in China, its potential is growing.

In general, Chinese customers use external services like spare parts, service agreements, and solutions to reach a high cost performance; in other words, the services they purchase offer good value for money. Seeking services either for premium price or free of charge are not alternatives that exclude each other. Customers desire for services offered in time and being able to solve their problems with a guaranteed quality and with a reasonable price. They usually expect some free services, such as information about novel offerings and purchasing options, but they are willing to pay for genuine value-added services. In particular, free services do not attract customers who have specific quality requirements.

4.1.3 The "guanxi" dilemma as a challenge and as an opportunity

As mentioned in the literature review, "guanxi" highlights the significance of interpersonal relationships. Our empirical study indicates that without "guanxi" foreigners will lose essential information about the decision makers, price levels, and competitors (cf. Fock and Woo, 1998). Especially in the traditional government-controlled industries, such as energy and mining, "guanxi" can be a real barrier for foreigners. They need a broker who has good connections with the government and state-owned enterprises, and who can act as a bridge to approach these stakeholders. Based on "guanxi", the local officials may also interpret regulations in a looser or stricter way – a practice, which our interviewees had suffered from to some extent. According to them, the earlier problem of favoring domestic providers is, however, diminishing.

The influence of "guanxi" varies depending on the situation. The interviewed service providers had perceived that "guanxi" has a strong impact on the basic services offered to traditional customers in the Western part of China or in Beijing. The impact is much smaller in the case of high value services offered to professional customers in the Eastern part of China or in Shanghai. Customers pointed out that a small project with a limited amount of investments may be heavily influenced by "guanxi", whereas a big project with relatedly large investments may rely more on service stability and overall price.

The interviews confirmed that "guanxi" plays a role in free of charge services, reflecting the impacts of Confucianism. Service managers may try to establish "guanxi" with customers in the long term by offering free services as "renqing" (favor). Charging services may result in losing "mianzi" (face) if customers expect to obtain them for free. It is also important to note that free of charge services in China reflect the development of earlier times: low labor costs, low service quality and low price policy. Although free services can be used to increase customer satisfaction and to promote long term relationships, they prevent the conduct of profitable business. The interviews indicate that an increasing number of customers are realizing this fact and accepting charged services. The diminishing influence of “guanxi”, growing labor costs, and internationalization function in the same direction. From the managerial viewpoint, the development can be supported by using detailed data which shows the value of services. Also the “productization” tools that make services as visible as possible are a way to convince customers.

An important notion by Chinese interviewees is that *some foreigners misunderstand “guanxi” and exaggerate its effects*. Circumstances in China are changing; especially the legal framework is better than before. “Guanxi” is a tool to overcome business barriers, but it cannot replace a sound strategy and long term efforts. This is “good news” from the viewpoint of Nordic service providers as it indicates that the fact-oriented style of conducting business, which is particularly prominent among Finns, may work well in the modern China (cf. Perlitz and Seger, 2004).

4.1.4 Differences based on the ownership of client companies

Besides the old tradition of Confucianism, which is reflected in the “guanxi” influence, the socio-political situation in China has impacts on the business environment (Fang, 1999). The rapid change in the ownership of companies is one important phenomenon (Qian and Wu, 2003). The interviews of Nordic service providers and Chinese customers revealed various business behaviors linked to the different ownership types. Privately-owned enterprises (POEs) are price-driven and risk taking. Foreign-owned enterprises (FOEs) follow the practices of their parent companies and often emphasize the process and service quality. State-owned enterprises (SOEs) avoid risks and focus on the stability of projects; on the other hand, they have smaller price pressure than POEs. A successful local reference is needed to win the trust of clients and partners in the case of all company types, but it is especially important in the case of SOEs.

An important separating factor between the ownership types is the speed of decision making. POEs are fast due to the possibly available funds, due to the practice that “the boss says the final word”, and due to the risk taking typical of them. FOEs are quite slow because of the formal decision making process by the board and the possible communication delays with the parent company. SOEs are a very heterogeneous based on the varying level of reforms and development: their degree of professionalism goes hand in hand with the growing internationalization. Traditional SOEs are slow and heavily “guanxi” oriented. They have to seek a common agreement from various bureaucracy departments. Professional SOEs are somewhere between POEs and FOEs. They base their decisions both on “guanxi” and on the price and quality; reaching a high cost performance is crucial to balance between these factors. From the viewpoint of Nordic service providers, the decision making in general is faster in China than in Western countries, even though it is relatively slow in the case sector – the traditional metal industry.

The interviews of Chinese customers of one Finnish service provider brought to the fore interesting contradictory opinions depending on the ownership type (POEs vs. FOEs). The Chinese customers belonging to POEs pointed out that the local service providers react more positively and faster; getting timely feedback from the foreign providers of services is more difficult. On the contrary, the Chinese customers representing FOEs considered that it is more convenient to conduct business with the Finnish service provider than with Chinese service providers. An explanation of the difference may be in the different payment system: many POEs are requested to pay before the delivery of services but FOEs are usually allowed to pay after the delivery.

4.2 Entering the Chinese KIBS markets

China's country-wide development of KIBS is at an early stage, but some regions (e.g. the Eastern part of China) show rapid growth of this sector (Qi and Guan, 2009). As a huge market, China is an interesting target country for Western KIBS companies. *Article 2* investigates this issue; it focuses on the market entry strategy and value chain roles of Western KIBS companies in China. The results are presented in three parts: the internationalization process and business in China, positioning in the value chain, and challenges and promoting factors in business. The first two parts focus on a more general analysis, while the last part describes more directly the experiences of success. The views of both Finnish and Chinese interviewees are used throughout, and the case companies' websites and internal reports supplement the results.

4.2.1 Internationalization process and business in China

The study on KIBS identified different forms in which case companies operate in China and different paths that the companies have selected when entering the Chinese markets. Also the stage of activities in China varies according to the experience of companies. Table 5 summarizes the different features of the case companies' internationalization in China.

The case companies show some features that deviate from the most typical forms and paths in services internationalization. All basic forms – FDI, export projects and activities through third parties – were observable. However, FDI are not as common as usually in services and KIBS (cf. Roberts, 1998). Local partners play a critical role in all three cases, either in the market entry or in the further development. This result may be due to the short time that the case companies have been present in the Chinese markets. Also the internationalization path deviates from the typical path identified in the literature: the case companies had not followed a domestic or other Western client to China, but internationalized independently. The interviews indicate that the novelty of the companies' expert areas may be a reason. Also the small size of domestic (Nordic) markets may be an influencing factor: there have been no clients with whom to internationalize.

Table 5: Forms, paths and stages of the case companies' internationalization in China

Case companies	Forms of presence in China	Collaboration with partners in China	Path to the Chinese markets	Stage of inter-nationalization in China
Clean tech engineering company	Subsidiary (FDI)	Joint venture	Cautious start and quickening development	Several business cases
Architectural design company	Export projects supported by a representative office	Partnership	International activities starting from remote countries	Some experience
3D media solutions company	Export via internet, possible presence through a third party	Partnership	A born global company	First steps taken

The first case company (specialized in clean tech engineering in the energy sector) had selected the deepest form of local presence: after a careful exploration of opportunities in its expert area in China, it had found an appropriate venture partner to open a subsidiary. The influential network of this local partner not only diminished the risk of FDI, but also enabled rapid development of the further business in China. Thus, the internalization path of this company can be characterized as a combination of a cautious start and quickening later development. The interviewees (both Finnish and Chinese) from the case company highlighted that the situation of the energy industry in China provides opportunities for this kind of a process: even though the industry is conservative, the demands for environmental protection and energy saving are growing due to the governmental policy and competition.

The second case company (architectural design in the eco-city context) had originally sent travelling experts to China to carry out export projects. However, the company had soon found out that it is difficult to convince customers when the presence is temporary. To enhance its establishment, the company selected "a light alternative": a representative office was set up in its local partner's incubation center, where the case company takes advantage of the partner's resources and shares the profit with the partner. Interestingly, this company had started its international activities from a remote country: China is its first foreign market. A background reason is the new active sustainability policy of the Chinese government, which is compatible with the company's specific focus in the development of eco-cities. The interaction between foreign and domestic markets is another interesting feature in this case. The interviewees pointed out that although not all Chinese eco-city projects generate profit for the company, the brand effect has helped it win projects in the domestic markets. This effect is important if the company broadens its activities globally.

The third case company (3D solutions for digital media) is in the stage of preparing its entry to the Chinese markets. Its preferred internationalization form is exports – more specifically exports that do not require physical transportation, i.e. exporting technology and services via the internet. The company has also aimed to acquire a presence in China through a third party. It has relocated one expert in China to be its representative and collaborate with a potential local partner. The task of this expert is to make a preliminary analysis concerning the Chinese 3D field and to identify if the current service offerings of the company meet local requirements in this niche market. This case company considers itself as a genuine "born global": it is compelled to extend its business beyond the home country because of the very small domestic market in the 3D media solutions. Internationalization has been its goal right from the founding of the company.

4.2.2 Positioning in the value chain

Based on the study, the case companies illustrate three different positions or roles in the value chain: an integrator, a concept designer, and a multi-stage actor. An actor having the role of an integrator coordinates the business of other stakeholders in a value chain or network. A concept designer is located upstream in the value chain. It has the capability to make a holistic analysis of clients' potential demands and thus to offer value-added services. A multi-stage actor may have a more or less influential role depending on which stages in the value chain are combined and how. Figure 1 illustrates these roles in an "abstracted" value chain (a value chain that only points out the actor role – not actual actors, activities and contents).

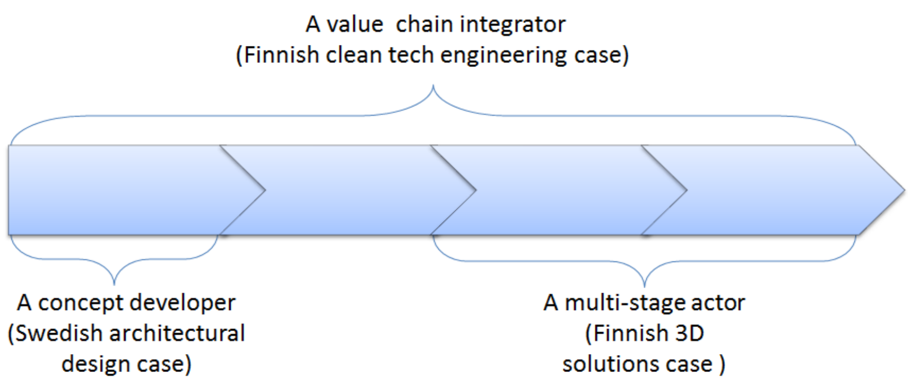

Figure 1: Positions of the case companies in an "abstracted" value chain

The first case company (the clean tech engineering company) is small in size, but has been able to acquire a position of *a value chain integrator* – a role that has interested KIBS scholars in particular (Miles, 2005). The integrator role is based on the company's profound knowledge in the energy industry and on its many years' experience in China. The company combines technology, material, components and equipment of the other providers into integrated wholes, and offers full service to its clients in Energy Management Contract (EMC) projects. Several factors support the business success of this company. First of all, the profit model is attractive to the clients, who do not need to make the capital investment, but only have to pay the costs back on the basis of the achieved energy saving during the contract period (e.g. within five years). In addition, the case company benefits from the Chinese government's subsidies; these subsidies are based on the investment and energy saving results. Finally, the supply chain partners are willing to cooperate with the case company because they can deliver their products to the end customers via the integrated efforts within EMC projects.

The second case company (the architectural design company) performs the role of *concept designer* upstream in the value chain. This role is an example of "offer to planning" (Holmström et al., 2001): it influences the project owner's decisions at the early stage of eco-city projects. By carefully analyzing the project owner's needs and desires, the case company can create a concept that includes both sustainable elements and profitable services. Its role may also be important in the later stages of the project. If the designer has the possibility to participate in the continuation of the project after the start, it can impact on the extent to which the original concept is followed in the implementation of eco-city projects. Because the owner's commitment is decisive here, convincing the owner is important again.

The third case company (3D media solutions) positions itself as a *multi-stage actor*. Its activities are located mainly at two points in the value chain: on the one hand, it creates 3D contents as a *producer*; on the other hand, it resells the contents and the related 3D equipment as an *agency*. The company focused on the producer role in its earlier business. However, the 3D market is not mature yet and many clients lack the related hardware to display 3D contents. Therefore, the agency role has become essential to facilitate its 3D business development in the practice. In addition, as a new and small incomer, this company does not have enough resources to manage the whole value network in China. It tries to focus on 3D contents creation and reselling, and hopes that the potential partners can take a portion of the selling agency for 3D equipment in China. Currently the price level for the above-mentioned services can hardly be compromised between the case company and the majority of local customers. Therefore, this company is seeking a niche market to provide 3D solutions with a premium price and high quality on the one hand, and on the other is trying to reduce the costs to win price sensitive clients by utilizing its own technology but partners' labor resources.

4.2.3 Challenges and promoting factors in KIBS

This study also indicated challenges and promoting factors when Western KIBS companies enter the Chinese market. *Local references* turned out to be a crucial factor from Nordic KIBS companies' perspective. In this respect, the situation is good only in the clean tech engineering company, which has abundant references based on its more than 100 energy efficiency projects. The architectural design company has only a couple of references, and an additional problem is that even these references concern projects at the conceptual stage (i.e. they still await implementation). Also the 3D media solution company has met challenges in building local credibility because it is not yet an established company in China. The experience of both the architectural design and 3D media solution companies shows, however, that a well-known partner can to some extent compensate for the lack of references.

The combination of Western and Chinese representatives seems the best way to compile human resources. Chinese customers are willing to see foreigners in projects but prefer to cope with locals in practice. A foreign face is convincing when the major lines of business are discussed with clients and local partners. All case companies had sent their own experts to China in order to enhance their credibility in this way. On the other hand, their experience indicated that Chinese employees, including both their own and partners' resources, are very helpful when negotiating the agreement details. They are familiar with the culture and know even the niche markets.

A reasonable pricing strategy is necessary for the competitive advantage of Western KIBS companies in China. The case companies reported a common complaint of high price from local clients. They applied different means to solve this problem. The clean tech engineering company utilizes local resources as much as possible to screw down the costs; on the other hand, it has adopted value-based business strategy in which sharing the profit with clients is a central element. The architectural design company is planning differentiated prices. The design of the core concept that is carried out in the West with foreign resources would follow the Western prices, whereas the preliminary and follow-up work implemented in China with local resources would follow the local prices. The current price level of the 3D solution company is not very competitive in China; however, the company is considering a partnership to reduce its prices. This partnership would enable combining its own technology and local manual work.

The payment risk in China cannot be omitted. The clean tech engineering company linked the problem to client categories. State-owned enterprises are more reliable although the payment may be delayed, whereas the privately-owned enterprises may be risky. Thus, this company prefers to cooperate with stakeholders such as local environmental bureaus, regional distributors, or even banks to exert pressure for the payment. The architectural design company had experienced difficulties in receiving the full payment as agreed: the first invoices that cover the costs are usually paid, but the final payment that includes the profit is not always realized. The 3D media solution company had developed a practice in which it invoices premium customers after the service but risky customers beforehand.

4.3 The emergence of creative industries in China

Creative industries intermingling with cultural industries are important areas in the promotion of economic growth and innovation. The development of these industries has earlier been much slower in China than in the Western countries, but recently it has aroused increasing attention and has been included in the policy program of the Chinese central government (NDRC, 2006; Zhang et al., 2013). *Article 3* elaborates the ways in which cultural and creative industries are understood in China and tackles the country-specific challenges in their development. The results are discussed in three parts. First the concept of cultural and creative industries in China is opened up; a change from cultural institutions to the industrialization of culture is a central phenomenon to point out. Thereafter the practical applications and future prospects in these industries are examined. Original Chinese literature and governmental documentation (Appendices 1 A and 1 B) are the main sources for the results in these parts. Finally, the particular challenges and opportunities for Western service providers are presented. The interviews and internal reports of the case company (3D solutions company), and the discussions in seminars and exhibitions in China, form the empirical material. Original Chinese literature (Appendix 1 A) has also been used in the case context.

4.3.1 The concept of cultural and creative industries in China

Culture institutions dominated China's cultural development during the period of the "socialist orthodoxy" from 1949 to 1979. During this period, culture was mainly described in conventional Marxist terms as the superstructure reflecting the base of the economic reality (Keane, 2004). *The industrialization of culture* started in the 1980s after China initiated its "open door" policy (Deng, 2006). The concept of culture market has appeared in policy discourse since the early 1990s when China has been deepening the reform towards a market economy (Keane, 2004). The concept of *culture industries* emerged in the late 1990s. The booming economy and the large consumer market in China have generated huge demands in culture industries, especially in the areas of new media and high value adding offerings.

The concept of *creative industries* arrived in China in the middle of the last decade simultaneously with the general economic transition from manufacturing to services (Keane, 2009). It is changing people's mindset from the former "made in China" to a more modern brand "created/designed in China" (ibid.). The concept of creativity has matched well with China's current policy of building an "innovative nation". In his book "Creative Industries are Changing China", Li (2008, p. 3) defines a creative industry as one that "*relies upon creative ideas, skills and advanced technology as core elements, increases value in production and consumption, and creates wealth and provides multiple jobs for the society through a series of activities*". Corresponding to the definitions of creative industries in Western countries, societal and economic goals are clearly visible in this definition. In addition, advanced technology has been regarded as one of the core elements in the Chinese creative industries. This emphasis deviates clearly from the definition of the traditional cultural industries.

This core element is also included in the recent combinatory concept of *cultural creative industries* in China. It comprises culture, creativity, and information technology, and highlights the characteristics of added value, high intelligence, and strong convergence (Xu and Yao, 2012). However, this kind of a combinatory expression is not common in Western countries. Because China wants to become known in the foreign markets based on its cultural and creative products, the expression has been modified into the Western form "cultural and creative industries" in international contexts (Zhang, 2011b). This form was for the first time written into China's 11th Five-Year (2006-2010) Plan in 2006 (NDRC, 2006). A little earlier in 2002, Taiwan had already adopted the same concept in its policy program, and defined it as follows: "*the industry to enhance the overall quality of life, with the potential to create wealth and employment opportunities from the creative or cultural accumulation and use of different forms of intellectual property*" (CCA, 2004). Although there are still divergent views on the detailed definitions, many Chinese scholars emphasize the importance of both the heritage of traditional Chinese culture and the utilization of advanced technology (Li, 2008; Xu and Yao, 2012).

Cultural and creative industries have been regarded as a driving force to promote regional growth based on modern science, technology and cultural resources (Deng, 2006). When a country reaches a certain level of development in the international comparison, its economic growth will increasingly rely on cultural and creative industries (Zhang et al., 2013). In China, the current advancement of these industries mainly concentrates on the Eastern part of the country. However, there is a huge potential also in the Western part. Thus, growth can be achieved by balancing regional differences. More generally, the large room for improvement in China is visible in the fact that current average consumption of cultural products and services comprises only 7% of Chinese family expenditures – much less than in the US and Western European countries where the share is about 30% (Zhang et al., 2013).

4.3.2 The development of cultural and creative industries in China

The importance of cultural and creative industries has been recently highlighted by the Chinese government (Xu and Yao, 2012). Consequently, the production of these industries has grown by

60 times in the past 10 years. It has reached the level of 1,807 billion RMB, accounting for 4% of GDP (China National Statistics Bureau, 2013). On the other hand, even though cultural and creative industries are a “hot topic” today, they are still at an exploratory stage in China. A visible and comprehensive industrial chain has not been formed yet (Xu and Yao, 2012). China has abundant cultural resources, but it is relatively small as the provider of cultural and creative products and services in both domestic and international markets due to the slow development in this field before the 2000s (Deng, 2006; Cai and Cai, 2011).

There have also been positive indications of the effectiveness of the political decision making at the regional level: more than half of the provinces in China have included cultural and creative industries in the local planning of economic development (Zhang, 2010). However, some regional applications are problematic. Numerous cultural and creative industry parks in various regions of China have been established based on the development plans of local governments (Zhang, 2011 a). A major concern is that many parks, especially in less advanced areas, lack entrepreneurs and experts. Some local governments only follow the trend to build physical facilities, but neglect an operational plan to attract qualified enterprises. So far, China has three actual regional clusters in cultural and creative industries. These are situated in the developed regions in the Eastern part: Beijing, Shanghai and Guangzhou (ibid.). In these regions, the development meets the requirements of genuine economy transition.

The distortion of competition and the inefficient use of public financing challenge the nationwide development of cultural and creative industries. Many enterprises rely on the governmental support to a great extent, and concentrate on attracting the government to be their client instead of focusing on innovativeness (Zhang, 2011 b). When the government showed an interest to learn from the successful experience of Japan, many enterprises started to turn to animation as a key part in the development of cultural and creative industries. Only in one year of 2009, more than 400,000 minutes of domestic TV cartoons were produced (SARFT, 2010). However, the quality has not matched the quantity. The budget of the government’s financial support in this field can even cover the total production costs of all these domestic cartoons. It led to a large amount of unqualified and repetitive productions (ibid.).

Similarly to quality impacts, there is a shortage of domestic professionals in the development of cultural and creative industries in China. Currently, less than 1 million professionals are working in this field, while the real need for the new workforce during the 12th Five-Year Plan (2011-2015) (NDRC, 2011) has been estimated to be more than 10 million. The estimation is based on consumer demands and the ongoing growth of culture and creative industries (Su, 2011). The Chinese government has realized this problem and utilized strong financial support to encourage young talents to start their careers in this area. Also Western providers are encouraged to sell their products and services to China; however, supplementing these products and services with elements of the Chinese culture is desirable. Also the "going out" of Chinese culture is realized simultaneously, with the hope to improve China's international impact (Zhang et al., 2013).

Both ordinary people and elites in China have understood that the traditional industrialization with a high-consumption and high-pollution model cannot continue, but the low-carbon and green economy will become an important direction for in the future development of China (Zhao and Huang, 2011). Following the success in the exploitation of the "World Factory", China is now attempting to explore new possibilities: cultural and creative industries are a transition project in its national policy (Cai and Cai, 2011). On the one hand, Chinese consumers' non-material needs have been growing along with the economy boom during the past three decades and there is huge demand for constant renewal of knowledge and ideas. On the other hand, economic globalization is increasing the international competition and driving China to enhance core competitiveness by added value of products and services (Hu, 2007). Cultural and creative industries play an important role for China in demonstrating its soft power in the global market.

4.3.3 Chinese creative industries from the viewpoint of Western providers

There are peculiar features in the Chinese economy that manifest themselves in some sectors in particular. One of them is the piracy phenomenon. It is still common in China and clearly visible in creative industries. Although China has enacted its first copyright law in the early 1990s, the implementation of this law has been very poor so far (Montgomery and Fitzgerald, 2006). For instance, pirated DVDs and CDs are hampering the development of the domestic marketplace and creating ambivalence for international investors (Keane, 2004). China's illegal distribution channel is well established, offering a full range of services (Montgomery and Fitzgerald, 2006). It is estimated that the piracy rate in film and music accounts for more than 80% of the market share (ibid.). Many consumers are used to getting free access to cultural and creative products. A coin has two sides in the case context. According to the interviews of both Western managers and Chinese potential partners, there are abundant 3D contents available for free in China, but it is difficult to find high quality contents with impressive stories. This provides a good opportunity for the case company in this niche market. Based on the discussions in the seminars and exhibitions, clients' attitudes towards 3D indicate a change from "fresh and interesting things" to "excellent experience". Only a few capable talents and related technologies in China are able to meet this changing demand.

On the other hand, the strong centralized power of the government challenges Western service providers in China. The strict censorship regulation in the traditional cultural industry is an example that came out in the interviews: Western service providers should be aware of this issue and make sure that their cultural and creative contents are kept within the government allowed scope in order to pass the censorship. Originating from the ideological control of the previous cultural institutions, the censorship has prevailed since the establishment of the Chinese Film Bureau (Montgomery, 2010). The censorship committee was set up in this bureau to decide if a film, animation or documentary scripts were suitable for production to the public (Zhang, 2004). Although the economic reform has been carried out for more than three decades, the political reform in China has still lagged behind. The censorship on cultural and creative industries continues by the State Administration of Press, Publication, Radio, Film and Television of the People's Republic of China (SAPPRFT). Curious enough, censorship control only concerns the official distribution channels of cultural and creative contents; it does not concern pirate products (Montgomery and Fitzgerald, 2006).

The traditional Confucian culture is one factor that maintains the above-described practices. The Confucian view avoids breaking “the patterns of the past” (Keane, 2009) and highlights transmitting instead of creating (Makeham, 2003). Thus, the Confucian culture does not favor innovation, at least in the form of radical novelties. As the copyrights cannot be protected and passing the strict censorship is risky, many local producers of cultural and creative contents do not put much effort into innovation, but copy or parody – developing a practice that gains general acceptance (Hennessey, 2011). A positive side from the viewpoint of the case company is that the Chinese are keen on learning the new technology and adapting it incrementally. Thus, an opportunity to the case company is to introduce new and high technologies in the 3D field to potential partners, and together with them to adapt their offerings to the clients' requirements. In less mature sectors, like creative industries, collaboration with partners is very important. This approach not only adds the customer value but also gains the government's acceptance. Due to a large amount of governmental influence in these industries in China, the case company seeks partners with a governmental background or access. However, because the company is small, it takes time to prove its capability and credibility and win the partners' trust.

4.4 Chinese eco-cities

Eco-cities reflect sustainability concerns in China in a concrete way. The initiative for eco-cities is promoted by the government and is an answer to the combined pressure of urbanization and environmental protection (Huang, 2000; Yip, 2008). *Article 4* analyzes the specificities and practical applications of Chinese eco-cities; based on our case study, it also illustrates international collaboration in the sustainability context. The results are summarized in four sections: eco-city as part of Chinese sustainability policy, applications of the eco-city concept in China, comparison with other concepts and Western approaches (e.g. smart city), and opportunities and challenges for Western providers. In the first three sections, the sources of the results are the original Chinese literature and governmental documentation (Appendices 1 A and 1 B), and the case companies' internal reports. The results in the last section are based on the interviews of the case companies and discussions in seminars and exhibitions in China.

4.4.1 Eco-city as part of Chinese sustainability policy

Many countries have developed the eco-city concept since the early 2000s (Joss, 2010). Recently, China has made this concept a central element in its sustainability policy. China has even become an important pioneer in the large-scale applications of eco-cities (Hald, 2009). Several reasons explain this phenomenon. The first reason is *an exceptionally hard environmental pressure*. The rapid economic development over the past three decades has led to a very serious pollution problem. The initiative to construct eco-cities has timely caught the Chinese policy of relieving this problem. Sustainability has been emphasized as a priority in China's future growth: the central government intends to promote a green economy (Liu, 2011). Consequently, the Chinese Ministry of Environmental Protection issued "guidelines on building ecological province, ecological city and ecological country" in 2003 and revised it in 2007 (Qiang, 2009).

Second, the Chinese *socio-political system* makes the implementation of an eco-city possible. The centralized government enables efficiency in the implementation of decisions. The country is able to create a new city from scratch. It has also been argued that China is more willing to invest in previously untried new technologies than the more skeptical and public-inquiry-prone West (Hald, 2009). Eco-city projects are an illustrative example of the "leapfrogging" that results from this attitude: in these projects, China aims to adopt modern planning and construction technologies that overtake the past limitations (Yuann and Inch, 2008). China has even planned to construct the world's biggest eco-city to demonstrate its modernity. After the economy boom, this kind of "marketing" has been a typical expression of the search for national identity through international recognition (Hald, 2009). The goal has also been achieved: the eco-city concept has attracted a considerable media attention globally. On the other hand, it is questionable whether genuine eco-cities have yet been built because the interpretation of the concept varies.

Third, *the nature of the urbanization process* in China includes specific characteristics. China's urban transition history differs from the history of the West, particularly from that in Europe (Hald, 2009). In Europe, the roots of cities are in city-states with self-governance, while the presence of the national central power has always been characteristic of Chinese cities (Friedmann, 2005). This history still influences the development. The upper level government holds the right to appoint key personnel in their subordinate organizations, which correspondingly creates incentives for local officials to climb up in the administrative hierarchy (Chan, 2010). As long as the central government concentrated on the economic growth as the primary goal, also the local administrators followed this goal, even though it sacrificed the protection of the environment (Chan, 2010). Thus, a prerequisite for change has been an attitudinal change within the central national power.

In the *administration of urbanization*, China has aimed at balancing the development of rural and urban areas to prevent exceeding the capacity of the environment and other resources in cities. Consequently, a strict separation is made between the urban and rural inhabitants through “the hukou system” of the household registration (Hald, 2009). Rural residents migrating to cities may apply an urban “hukou”, but the acceptance depends on one’s qualification and the quota of “hukou” in that city (Chan and Zhang, 1999). The citizens with an urban “hukou” are better covered by the welfare and educational system than those with non-urban “hukou”. Thus, even though the system is justified from the viewpoint of resources, it causes equality problems. There are different administrative levels of cities in China. Achieving the urban “hukou” becomes gradually more difficult with a move to a county-level city, further to a prefecture-level city, and finally to a province-level city (Goodkind and West, 2002).

The urban system in China operates on the basis of *administrative hierarchy*: large cities have a better access to capital markets and have more fiscal resources (Henderson, 2009). This drives their further expansion: more and more citizens migrate to large cities as they provide many kinds of benefits. The continuous growth of cities causes serious problems such as air pollution, traffic jam, energy shortage, and so on. Eco-cities are planned to be ecologically healthy cities with consideration of environmental impact and minimization of the waste and pollution (Cheng and Hu, 2010). They are a way to solve sustainability problems and partially also the equality problem: the citizens moving to eco-cities can have "hukou" there, and if the government allocates "soft resources" – such as education, hospitals and work opportunities – to the eco-cities, an increasing number of citizens have access to welfare and necessary services.

4.4.2 Applications of the eco-city concept in China

As stated above, the implementation of the eco-city concept is still at an early phase in China (Huang, 2000). General principles have been formulated by the government, but concrete guidelines and models on how to build an eco-city are just emerging (Huang, 2000; Ma, 2009). There is lack of detailed technological applications, financing models, and so on. Many eco-city projects are focusing on visions, concepts, and goals at the macro level (Yip, 2008). Based on the original Chinese literature and governmental documentation (cf. NDRC, 2006, Zhang et al., 2009), five types of issues are identifiable in eco-cities: *general city planning, human-nature interaction, infrastructure systems and energy production, the provision of services, and social sustainability*.

Managing the urban expansion is a central topic in general city planning. Urbanization in China takes place in two forms. There is stepwise expansion of existing cities, similarly to Western cities. A more unique way is the governmentally directed establishment of new suburbs, which are actually situated in rural areas quite far from the main city. They are often founded under some specific theme like “the city of future technology” (Yu and Gong, 2012). Local self-sufficiency – a balance between resource generation and consumption – is pursued in them (Chen, 2011). An integral part of the eco-city concept is restoring the damaged environment and rebuilding biodiversity (Zhang et al., 2009). It aims to improve human-nature interaction and create green spaces. Traditional cultural elements support this aim: “Syncretism between Heaven and Man” is a philosophy which emphasizes the balance between people and nature (Li et al., 2004).

From a more practical viewpoint, the eco-city concept includes many technology-intensive parts. Renewable energy, improved water supply, and proper treatment of sewage and garbage are important as the problems in China are huge. Both nationwide and local solutions have been developed. The behavior of citizens is a crucial aspect that influences the success of these efforts. Human factors are also apparent in services that are linked to the concept of eco-city. The development of environment friendly transportation is one of the most central issues in this context. The largest Chinese cities have strongly promoted public transportation and restricted the use of private cars, but the simultaneous growth of the cities has diminished the impacts of these efforts on the traffic congestion (Wen, 2007; Ma, 2009). In the area of housing, the concept of green building is applied to fight against construction projects of poor quality (Qin, 2015). Housing is also a way to diminish the negative effects of social stratification. Subsidized public housing and barrier-free accessibility belong to the principles of eco-cities.

The implementation of the Chinese eco-cities varies from large projects with a full coverage of the different dimensions to very small projects with a specific target. Joss (2010) has used a three-part categorization in his international comparison of eco-cities: technological innovation, integrated sustainability planning, and civic empowerment/involvement. In the Chinese context, this categorization is a good starting point but requires a modification. First, it is not possible to analyze technological innovation apart from social aspects, because a core idea of the Chinese eco-cities is to integrate them. Second, the category of “civic empowerment/ involvement” is not applicable in China, because the “top-down” approach is dominant: the city authorities and other policy makers lead the steps taken in the Chinese eco-city projects. While these two aspects in Joss’ categorization have to be given up, the basic idea of the varying scope and complexity in eco-city projects is still relevant. Based on the results of our study, a categorization into narrow, combinatory and comprehensive approaches seems suitable. The narrow approach points out that even an individual investment may be called an eco-city project in China. Small initiatives are often encouraged as a “kick-off” for an eco-city project. A combinatory approach has generally included a project focusing on renewable energy, green building and the promotion of public transportation. A comprehensive approach refers to the largest scale eco-city projects which involve strong societal and social contents with a top-down organization.

4.4.3 Comparison of the Chinese eco-city concept with the respective Western approaches

There are also other concepts used alternatively with the concept of eco-city in China. Eco-city and eco-town are used synonymously depending on the size of the project; eco-village is used to refer to a small rural community with an eco-agenda (Joss et al., 2011). As part of an eco-city, eco (industrial) parks are governmental attempts to attract high-tech and/or green industries and drive away traditional polluting industries (ibid.). "Low carbon city" or "green city" is often used to depict the aim of emission reduction in the reconstruction of existing cities (Qiu, 2009).

The new stage of digitalization (big data, internet of things etc.) has brought to the fore the concept of smart city. In Western countries, it is today more popular than the concept of eco-city (Caragliu and Nijkamp, 2011). The basic idea includes the development of a sustainable digital economy, in which technology – especially ICT – balances the relation with the environment via the changes in the lifestyle of people (Miller and Wilsdon, 2001; Souter et al., 2010). In China, *the concept of smart city is interpreted more technologically* (Gu, 2013). In addition to the smart city, the concept of *digital city* is in general use. Both have been discussed in terms of hi-tech development, such as smart grids, ICT networks, and the related service provision (Joss et al., 2011; Song and Fu 2013; Wang, 2012). Some efforts to specify conceptual differences exist. A smart city has been defined as "a comprehensive digital city", characterized by visual and measurable urban management and intelligent operations (Su et al., 2011).

Some Chinese scholars have suggested that a smart city should also include the sustainable elements of eco-cities (Gu, 2013; Liu and Peng, 2013). This means that the digital technology should be used for solving the urgent problems in public services, for strengthening the social management systems and capabilities, and for dealing with the issues of urban ecology – all being very topical tasks in China. In this interpretation, the basic goal of smart cities and eco-cities is the same; only the tools are different. Both smart cities and eco-cities should pursue effective governmental operations, advanced industries, better public services, and an efficient information infrastructure. However, this view does not yet represent the dominant thinking in China. (ibid.) Whereas the Western smart cities have included sustainability as a core element (Caragliu and Nijkamp, 2011), the Chinese eco-projects and smart projects have developed separately. When combined, the concepts of "digital eco-city" or "smart eco-city" are used.

The central government in China has encouraged the development of smart cities at the local level, with less tight top-down coordination and macro-level guidance than in eco-cities (Wang, 2012). It seems that the smart city projects have aroused positive publicity among citizens – a phenomenon that may foster grass-roots initiatives. On the other hand, some regional bodies just follow the trend without fully understanding the systemic whole that should be constructed for a smart city. As in the case of eco-cities, an abundant number of smart city projects (more than 200) have been established (Song and Fu, 2013). Too many of them are weakly coordinated which leads to overlapping plans by different agencies (ibid.).

4.4.4 Opportunities and challenges for Western service providers

The case study in a Nordic architectural company, which has experience in Chinese eco-city projects, revealed three important aspects from the viewpoint of Western providers participating in these projects: *key stakeholders and their impact on the implementation of eco-cities, typical tensions in the collaboration between the local actors and the foreigners, and benefits that foreigners can gain from participation in Chinese eco-city projects.* These points also came out in the discussions in eco-city seminars and exhibitions in China.

As regards the interests that drive the development of eco-cities, the role of local politicians turned out to be essential. Eco-city projects are utilized to attract both domestic and foreign investments: the promotion of local economic development is one of the most important goals of the local government. If successful, the project also accumulates political capital that fosters the promotion of the officials involved. Another stakeholder group whose interests the eco-cities support is the real estate industry. Recently, this industry has become very profitable in China along with the boom of housing markets. Real estate developers use the eco-city concept as a means to obtain new projects and support from the government, and to draw the attention of citizens to their projects. There are many projects that have been “packaged” under the eco-city brand, but which actually are upgraded real estate projects. It is also usual that a project starts with ambitious goals, but the resources are not sufficient to meet the goals.

In order to promote successful collaboration, it is important to be aware of typical tensions between the Chinese and foreign project members. From the viewpoint of foreigners, the lack of power in practical implementations is a common problem: the foreigners sometimes feel that the government only needs a foreign face for branding purposes. The Chinese stakeholders, on the other hand, desire that the foreign companies would understand better the local situation and demands, and would be practically (not too conceptually) oriented. The need for practical orientation derives from the above-mentioned fact that the eco-city projects are usually large in the beginning but very often need some modification in later stages. The foreign design companies and technology providers should be ready to show flexibility when the best balance is sought between the concept design and the practical implementation.

Despite the challenges, a Western concept designer can benefit in many ways from the participation in a Chinese eco-city project. A concept designer is not a traditional architect who concentrates on “drawing”, but a consultant and an expert of “design philosophy” who takes the responsibility to direct the implementation according to the goals set. For the foreign providers of technology and equipment, eco-city projects offer new opportunities: they can test their technology and promote their products in a large-scale context. There are also prospects for even more ambitious roles. An expert company may integrate the network of several small actors in an eco-city project and offer overall solutions to the clients. These kinds of solutions are appreciated by governmental clients, but they require the development of common platforms.

5 Discussion

5.1 Summary of the results

This chapter considers the key results of the articles as answers to the research questions, and compares them to the results of previous studies. The chapter has been divided into two sections corresponding to the two parts of the main research question: *what are the specificities and new phenomena in B2B service business in China, and what kinds of opportunities and challenges do they provide to Western business actors in the Chinese markets*? The first section focuses on the service economy in China, discussing the results from two service sectors – industrial services and KIBS – and from two topics – creative industries and sustainability (eco-cities). The second section concerns the opportunities and challenges that Western actors meet in the Chinese markets. Both cultural issues and issues linked to the socio-political context are pointed out.

5.1.1 Perspectives to the service economy in China

Studying the service economy in China from the perspective of industrial services and KIBS is justifiable due to two reasons: they are rapidly growing sectors and they also support the development of other sectors. In Western countries, their importance has been understood quite a while and they are also gaining an increasing attention in China. In addition, this dissertation brings to the fore two new service-linked topics: the development of creative industries and sustainability efforts. In both of them, the development in China has aroused interest worldwide.

As regards industrial services, the case studies illustrated *characteristics of servitization* and provided some indications of *the success of different types of offerings* in China. The motivation of servitization is the huge market potential for equipment and services in China. The government's policy favoring sustainable development also creates demand for new services. Chinese manufacturers are realizing the importance of moving up the value chain: local customers have started to demand value-added services. As a result, Chinese manufacturing has servitized rapidly during recent years (Neely et al., 2011). Servitization has become an attractive and competitive strategy for manufacturing companies to accomplish upgrade transformation and generate new profit and high margins. Manufacturers are improving their service competence and deepening the relationship with customers via the servitization process.

The development has meant a transfer from services supporting the product (SSP) to services supporting the customer's processes (SSCP) and further to services supporting the customer's business (SSCB) (cf. Turunen and Toivonen, 2011). However, the interviews of this study indicate that SSP still dominate service offerings in China, and spare parts play a critical role. This dominance reflects the fact that Chinese customers prefer tangible products over services. Although the situation restricts the development of service business, it provides an opportunity to integrate services to products or provide a package of products and services at a premium price. This opportunity can be realized in the solution business, which is commonly recognized to be the core in SSCB category. Solutions are quite popular in China as they have tangible attributes based on the combination of goods and services. Solutions attract Chinese customers more than the SSCP category, even though the latter has recently been increasing, too. However, solutions still account for a very small volume in the total service offerings. Solution business is also understood in different ways within and across companies.

The KIBS study carried out within this dissertation focused on Western companies' internationalization process and value chain positioning in China. All basic forms of international operations were recognized in the case companies: a subsidiary, export projects, and a presence through a third party. Irrespective of the form, *the role of local collaboration partners* was central. The form of foreign presence was linked to the length of experience in China: a subsidiary was established by the company with the longest experience; export projects were carried out by the company with some experience, and operations through a third party was the form selected by the company which was taking its first steps in the Chinese market. This finding confirms the view that the growing experience increases the possibility to select more risky forms of foreign operations. In addition, the study confirms the earlier results about *the combinations of different paths in internationalization*. One company had started cautiously but deepened its operations in an accelerated pace after it had found a local partner. The behavior of another company indicated that China's role as a pioneer country in some areas (e.g. huge eco-cities) can attract experimenting. For this company China was the first foreign market. The third case implies an important driver for internationalization: the small size of the domestic market compels companies to internationalize right from the start – to establish a "born global" company.

The experience of the case companies (KIBS) revealed that there are *many ways to acquire a strong role in value chains*. The first is the role of an integrator: coordinating the activities of upstream suppliers and providing broad solutions to the downstream clients. This role requires profound knowledge, rich experience, abundant resources and a good financial situation. The second possibility is to position oneself at the beginning of the value chain. This position enables mapping the potential demand and providing "offer to planning" consultancy. The third alternative is to operate at several stages in the value chain and offer flexibly various types of services based on the demands of clients and the own capacity of the company.

The study on creative industries indicated that the popularity of these industries is not only a Western phenomenon but an important policy focus in China, too. Creative industries are in line with the striving for industrial upgrade in China: fostering the emergence of an "innovation country". As a result, China has transferred *from the time of the dominance of cultural institutions to the time which is characterized by the industrialization of culture*. The improved living standards cause growing demands in the large consumer markets and drive this transition. A concrete manifestation of the rise of creative industries is the numerous cultural and creative parks that have been built in a very short time frame in different regions of China.

However, there are *still linkages to the earlier phases* when cultural institutions dominated the field. On the positive side, China has aimed to combine continuity and renewal by adopting the concept "cultural creative industries", which emphasizes creativity and the utilization of technology in traditional cultural industries. On the negative side, many local actors still rely heavily on the governmental support – not on a genuine entrepreneurship. An example is some "creative parks" in which physical facilities have been built on the basis of investment aid but there is no operational plan to attract enterprises. The ideological control of the previous cultural institutions is still visible in censorship. This control is slowing down the export of creative products from the West to China. Another serious problem is piracy, which some researchers have argued to be firmly rooted in the Chinese culture: instead of innovation, the Confucian culture favors "transmitting" which is realized in copying (Makeham, 2003; Keane, 2009).

The study on Chinese eco-cities opened up the contents of the eco-city concept in theory and practice. It revealed three important *drivers in the eco-city development in China*: the exceptionally hard environmental pressure, the centralized socio-political system as an enabler for large projects, and the specific nature of the urbanization process. Another interesting finding is *the broad scope of the Chinese eco-city concept*; it integrates technological innovation and social aspects. Basic issues identifiable in eco-city projects are general city planning, human-nature interaction, infrastructure systems and energy production, the provision of services, and social sustainability. However, only the most comprehensive projects include strong societal and social contents. More typical are projects that combine renewable energy, green building and the promotion of public transportation. It is also possible that the project includes only an individual investment and uses the eco-city brand in order to get financing for it. Many eco-city projects have an ambitious plan and get smaller in the implementation stage.

Boosting the eco-city projects with digital solutions does not seem to be an equally strong trend in China as it is in the Western countries, where the concept of smart city is popular and includes sustainability as a core element (cf. Liu and Peng, 2013). In China, the eco-projects and smart projects have developed separately and *the concept of smart city is interpreted more technologically*. However, there is emerging discussion about the need for a broader interpretation: using the digital technology for solving the urgent problems in public services, for strengthening the social management systems and capabilities, and for dealing with the issues of urban ecology (cf. Song and Fu, 2013).

5.1.2 Opportunities and challenges for Western service providers

Deepening the understanding on the opportunities and challenges in the internationalization of business-to-business (B2B) services has been the other main aim in this dissertation. The research has focused on a context in which service providers from a small, developed and open economy meet clients and other stakeholders of an economy characterized by a huge size, emerging market and hierarchical behavior. Nordic countries (mainly Finland) have exemplified the service providers and China has been examined as a target country. China has a long history and influential role today. It is an important representative of Eastern Asian cultures. Therefore, the preconditions of service business revealed by this research concern both country specific issues and the more general cultural climate in the Far East (Chen and Huat, 2007).

The case studies showed that *many differences between the Chinese and Western cultures were discussed in terms of "guanxi"*. In communication, the preference for high context and indirect style (Hall, 1976; Levine, 1985) were pointed out as a way to maintain and give "face". The emphasis on harmony in "guanxi" was described as a background reason for the acceptance of power distance (hierarchy) and for pursue of "collective good" instead of individual benefits; also the long-term orientation was mentioned as a central element in the emphasis on harmony (cf. Hofstede, 1980, 1991). The practice of ascription came out more rarely; however, it was mentioned as a feature linked to hierarchy (Trompenaars, 1996). Family orientation included in "guanxi" came out commonly in perceptions of the blurring boundaries between individual and business life; this characterized the dimension of a "diffuse culture". Correspondingly, abundant examples were given about the central role of interpersonal relationships, reflecting the dimension of a "particularist culture". (ibid.)

From the perspective of business success, the case studies indicate that "guanxi" is a necessary but not sufficient prerequisite. It is a way to demonstrate one's position within social networks, thus providing security and trust. It helps to contact key persons and gain useful information to improve business efficiency. On the other hand, "guanxi" cannot replace a professional business plan. When China is now developing a better legal framework and becoming more international, the importance of "guanxi" is decreasing, but remaining. The attitude towards innovation is an illustrative example of the interplay between the old and new thought patterns and practices. As mentioned above in the context of creative industries and the piracy problem, some researchers have argued that Confucianism does not favor innovations (Keane, 2009). On the other hand, the interviewees in our study highlighted that Chinese companies are keen to use new technologies and adapt them to local needs incrementally. They further pointed out that this provides an opportunity for Western companies – both in industrial services and in KIBS – to collaborate with Chinese companies to add value of offerings to clients. Another example is "free services". According to the experience of our interviewees, they are necessary in some cases to maintain “guanxi” but opportunities for charging increase, particularly in service-product solutions and premium offerings. Finally, our study confirmed the importance of geographical differences: the Eastern part of China is much less influenced by “guanxi” than the Western part.

The intermingling of the cultural impact with contextual factors was one of the most striking results in the case studies (cf. Kanter and Corn, 1994). In China, the core of this “mix” is the integration of the Confucian cultural tradition with the current socio-political system. The most visible cultural characteristic is “guanxi” and the most important socio-political element is the socialist planning economy in the reformed form. The strong *centralized power of the government* is a coin with two sides. On the one hand, as the central policy nowadays favors the development of service business, all areas examined in this research benefit from the situation. Manufacturing servitizes, the importance of KIBS is brought to the fore, creative industries receive financial support, and eco-city projects are promoted. Western providers have more and more opportunities to participate in the transition from manufacturing to services in China. On the other hand, the centralized power forms a barrier for foreign companies to offer services in traditional government-controlled business (e.g. the energy sector). A broker is needed in these areas to bridge the government and foreign providers. As regards the focus areas of this research, the impact of the central power is most clear in creative industries in the form of censorship.

Differences in business practices based on *the ownership of companies* were an important finding of this research. Industrial service companies highlighted the impacts of ownership, in particular. Privately-owned companies (POEs) are price-driven and risk taking; state-owned companies (SOEs) emphasize the project stability and risk avoidance; foreign-owned companies (FOEs) are process-focused and functionally oriented, appreciating value-added services. The findings show that the payment also varies according to the company type: POEs are most risky payers; SOEs are more reliable though their payment may be delayed; FOEs usually have no problem to pay in time. According to the interviews, these practical problems can be solved by invoicing premium clients after the delivery of services and risky clients beforehand.

Developing a suitable and competitive pricing strategy turned out to be challenging. However, there are several means to tackle this challenge. First, collaboration with a local partner helps Western providers follow the existing price level of services. Second, “guanxi” broadens the price range of services: good “guanxi” may help providers win an order with a premium price. Third, combining the Western and Chinese human resources is an important way to screw down the costs. Balance can be sought in different stages of a project: for instance, design can be carried out by the company’s own staff and implementation by the local staff. Fourth, value-based pricing can be adopted. Sharing costs and profits with clients is highly appreciated in the Chinese context if a successful local reference with detailed data on benefits is provided. This alternative seems promising in the future, especially because the labor costs are continuously increasing in China.

5.2 Theoretical contributions

A central result of this research is questioning the idea that China will follow the path that has characterized the development in the West – just lagging behind some decades (Nolan, 2005). There were indications that China may "jump over" some stages that have been considered inevitable in the West (cf. Chen and Li-Hua, 2011). Based on this result, theoretical contributions can be identified in two topics in particular: in the relationship between material and immaterial offerings, and in the relationship between technological and social issues. In addition, the results indicate that commonly used business concepts should not be interpreted too straightforwardly. One and the same concept can have a totally different interpretation in the Western and Eastern countries. Further, a confirmation was found to studies that have highlighted the multiple ways in which success in the international business can be achieved. Finally, some interesting observations concerning the applicability of service-dominant logic (SDL) in the Chinese context is a theoretical contribution of this research.

The *"jumping over" some developmental stages of Western countries* manifested itself in the study of industrial services in particular. The appreciation of material products has been a well-known phenomenon in China (Liu, 2007) and appears in the favoring of spare parts as the most important form of industrial services. In the Western theories on servitization, this has been interpreted as a transfer from the product focus to the process focus as the next stage (Paloheimo et al., 2004). However, this study revealed that the Chinese clients appreciate product-service solutions in addition services linked to material products. This *questions the linear view on servitization*: the development as a path from services supporting the product to services supporting the processes, and consultancy-type services as the most advanced stage. Another example is the Chinese customers' interest in performance-based pricing, which considers products and services as a whole and in which immaterial aspects play a central role. In the West, it has been regarded as a highly developed pricing type and often difficult to apply in practice (Hünerberg and Hüttmann, 2003).

A view which understands the inter-linkages between material and immaterial elements in production becomes highlighted when the human-technology systems based on the internet of things are now rapidly developing in manufacturing (cf. Främling et al., 2013). This development should not be interpreted as a technological issue only, but it is essential to understand the importance of services as an enabler for the application of technologies. The corresponding integration is needed in a broader scale in the efforts that aim to tackle the sustainability issues. In the Western countries, the promotion of sustainability has strongly focused on technology even though the importance of social sustainability has been highlighted in policy documents (Elzen et al., 2004). In China, *the inclusion of social issues is a central part of the* eco-city concept and manifests itself concretely in the activities targeted against social segregation, for instance.

General sustainability concerns and the implementation of Chinese eco-cities contribute to the topical discussion of *the urbanization management in the developing economies*.

An important finding in this research was *the difference between the Western and Eastern stakeholders concerning the meanings of commonly used business concepts*. Due to this difference, the stakeholders from different cultures may apply the same vocabulary without understanding how the counterparts interpret the meaning. The concept “value-added” is an example. The study on industrial services showed that Chinese clients regard this concept as a promise of immediate availability or rapid help in emergency situations. This interpretation differs dramatically from the Western interpretation in which expert offerings are referred to as value-added services. Another example is the Chinese concept “cultural creative industries”. It emphasizes the creativity and the use of technology in traditional cultural industries. In the West, the concept of cultural and creative industries refers to a sector in a less “goal-directed” way. In addition, the emphasis in the concept of innovation is different. In the West, the creation of innovations is appreciated and too slow dissemination is often a problem – in the field of service and social innovations, in particular (Harrison et al., 2010). In China, the traditional Confucian thinking encourages learning from others instead of the creation of novelties (leading to even negative phenomena like piracy).

In the internationalization of services, this research confirms the earlier studies that have highlighted *a versatile view* (cf. Majkgård and Sharma, 1998; Tuppura et al, 2008). There are various factors influencing the market success in a country with a different culture and socio-political system: the business environment, the nature of offerings, and the skills of the provider and the client. It is not enough to have general market information in the training and advice provided to internationalizing companies, but it is also important to analyze which alternative is the best to support continuous learning and international preparedness in each specific company case. Companies usually select more risky ways of foreign operations when their experience grows (Erramilli, 1991; Tuppura et al, 2008). However, the first international step in countries with a short *“psychic distance”* is not always the right strategy (Sharma and Johanson, 1987; Rubalcaba and Toivonen, 2015). In the case of China and Nordic actors, starting the international activities from this remote market is a feasible strategy especially in those fields in which China is a pioneering country – the eco city development for example. The branding effect can help the company’s business success in the domestic market.

Even though the development of service business has been lagging behind in China compared to Western countries, this research indicates that *service culture in a “tacit” form* may be deeply involved in the Chinese culture due to the Confucian influence. In the theoretical perspective, this means that the approach of service-dominant logic (SDL) may actually be quite near to the traditional Chinese culture and other cultures with Confucian and similar philosophical backgrounds, because it does not concentrate on services as offerings but highlights service as a relationship in the value co-creation (Vargo and Lusch, 2004, 2008). The earlier neglect of services in China may have reflected a difficulty to understand services as products. Thus, the main challenge in transferring the product- and market-orientation to the service field in China would be: how to combine the inherent relationship-oriented attitude and the unfamiliar idea of services being almost equivalent to goods.

5.3 Managerial contributions

The results of this research provide new understanding and supplement earlier knowledge on the central issues that Western providers have to take into account when they carry out service business in China. The views of practitioners have been linked to existing theories on service business. In the following, managerial contributions of this dissertation are summarized.

The role of tangibility is a critical concern in the service business carried out in China. Westerners should include tangible elements in their services and tackle the issue of free of charge services. In industrial service business, for example, spare parts can be used as the basis for volume business. Some services can be provided to customers for free; the premium price of products compensating the loss and making the business profitable. On the other hand, it is important to highlight that also integrated solutions, which combine products and services, correspond to the tangibility desires of Chinese customers. Thus, the solution business includes an important potential in China and is a way to increase service revenue.

In addition to separate service offerings, there is an increasing need for *a service mindset that can be applied equally in the case of material and immaterial products*. The service-dominant logic (SDL) highlights that also manufacturing firms should shift from a goods perspective towards a service perspective – from focusing on tangibles and technology to focusing on intangible resources, co-creation of value and relationships (Vargo and Lusch, 2004). The Chinese “guanxi” is in line with this view as it highlights interpersonal relationships for mutual benefits. While the spending of resources to improve “guanxi” networks with customers is reasonable, it is important to notice that a more strategic stance is gaining ground in China along with the modernization of the country. This change provides new opportunities for “the fact-oriented business style” of Nordic actors (cf. Perlitz and Seger, 2004); it may become strength in the collaboration with Chinese customers. In this context, it is important that Western providers show the added value of their services in practice, and help customers enhance their business operations in the long term.

The “guanxi” phenomenon summarizes many dimensions of the Chinese culture. It includes a high context and indirect communication style (Hall, 1976; Levine, 1985) to maintain and give “face”. A high power distance (hierarchy), collective thinking, and long-term orientation (Hofstede, 1980, 1991) are also characteristics of “guanxi”; they are linked to the Confucian striving for harmony. The “diffuse culture”, which combines the individual and business life in China, reflects the family orientation of “guanxi” (cf. Trompenaars, 1996). Correspondingly, the "particularist culture" highlights its emphasis on interpersonal relationships (ibid.). Thus, learning about “guanxi” is central task for Westerners working in China. In the business practice, “guanxi” helps to approach the right person and gain key information, which provides security and improves efficiency. It is a necessary prerequisite for the business success in China. However, the effect of “guanxi” should not be exaggerated: “guanxi” helps to overcome business barriers (e.g. bureaucracy and unfair treatment), but it cannot replace a sound business strategy.

Business challenges vary considerably according to the ownership of customer companies in China. Because state-owned enterprises (SOEs) are risk averse, successful references are particularly important for gaining orders from them. Due to the reform that has been going on in SOEs during the past three decades, “guanxi” is no more influential in all of them. It is still highly important in the traditional SOEs but not in the professional ones. In practice, traditional and professional SOEs can be identified on the basis of the degree of internationalization. In the case of privately-owned enterprises (POEs), which are more price-driven and take risks, one reasonable strategy is limiting the repertoire in order to reduce costs. However, it is important to continuously follow up the development of demand. Foreign-owned enterprises (FOEs), which focus on the quality of services, can be approached by marketing high quality services with premium price in a similar way as service business is conducted in Western countries.

The significance of local partners is a primary issue. Finding suitable partners and fostering “guanxi” with them is vital right from the start: it is needed before the actual business to enter the market. The partners function as business reference, provide additional resources, and open doors to broader networks. The role of networks is crucial in China. However, also *advanced technology* has a significant brand influence; it can be used as a “door knock” when dealing with customers and partners. Further, local customers’ demands on high quality services have essentially increased along with the economy boom, and this *premium market* is more profitable than traditional business areas. However, *cost performance* should be secured via the pricing strategy and a skillful combination of Western and Chinese resources. In the allocation of practical work, the price issue favors the conduct of the most demanding tasks with Western workforce and others with local resources. As regards decision making, the “foreign face” is beneficial in discussions about big lines while the local actors are needed in detailed negotiations.

The opportunities that China offers to Westerners in new topics are an important managerial implication of this research. The case studies indicate that Western experts can facilitate the development of service business in several fields in China. The different roles in the value chain describe the opportunities concretely. The role of an integrator includes a dominant position: the task is to help technology providers to realize the capital sales within the project scope. This role also meets the solution business preference of local clients in China. A concept designer functions in a consultancy role, educating the clients and being able to suggest value-added services after analyzing clients' potential desires and influencing clients' decisions at the early stage of the project. The concept designer can also collect partners to create a platform, and to integrate different technology and equipment providers to meet clients' demands. A multi-stage actor is in a position that enables a foreigner to learn about the Chinese business practices in a versatile way. In all these roles, foreign providers of services should carefully familiarize themselves with the local situation and the real demands of clients.

The case study on creative industries revealed that Westerners could also relieve the shortage of domestic professionals in some fields in China – to provide high quality media contents, for instance. However, practical collaboration is still quite demanding; it requires, among others, that Western products and services are supplemented with elements of the Chinese culture.

Finally, *open-mindedness is needed in learning the characteristics of the Chinese culture and socio-political situation.* There is a long tradition that prefers goods over services, but today the service business is developing dynamically. Respect for expertise grows and some service sectors – especially those linked to the advancement of sustainability and creative industries – are favored. On the other hand, this research indicates that there is a gap between the words and deeds of local governments in China: foreign companies may be treated more strictly than domestic companies. In order to diminish the consequences of the unfair competition, Western service providers should carefully study official regulations and learn about their regional applications. A good relationship with the local government will help in the acquisition of relevant information.

5.4 Limitations and suggestions for further studies

This research has approached the Chinese context in B-to-B service business from several perspectives, based on literature and empirical studies carried out mainly by interviewing. Its specific strength is quite an extensive review of original Chinese literature (Appendix 1), while the case studies include some limitations. They have been restricted to Finnish and Swedish service providers, whose experience may be "exceptional", reflecting the small size of the countries and a specific cultural background. Also the sectors examined are restricted: they cover manufacturing companies in the metal and engineering industry and KIBS in technical consultancy and media sectors. More companies from different Western countries and from different service sectors should be investigated in order to strengthen the generalizability of the results.

The new topics linked to creative industries and sustainability issues (eco-cities) need broader samples in particular, because the studies in this dissertation were based on a single case: a 3D contents provider in the former case and an architectural company in the latter case. As regards creative industries, an example of the interesting issues that could be tackled in further studies is deeper understanding about the influence of Confucianism. In the area of sustainability, the development of eco-cities is tightly linked to the policy strategies in China and could be investigated in more detail from this perspective. Also the different applications of the eco-city concept need additional empirical studies.

The rapid development in China raises continuously new interesting research issues. Many issues are relevant from the perspective of applied research: to help foreign companies enter the Chinese service market and increase revenue in different service categories. However, also the theoretical perspectives are important. First, *service theories* would benefit from a more extensive material acquired from developing countries – until now these theories have been developed on the basis of Western experience. Second, *culture theories* would benefit from applications in the service business. This research has taken a step in that direction, but the cultural differences were compared between the Western and Chinese business cultures only. In addition, the different cultural dimensions were mainly discussed in terms of the "guanxi" phenomenon. One reason for this focus may be the organization of the interviews on the basis of broad topics, which gave much freedom to the respondents. Consequently, the data received reflects the thoughts that were primary in their minds: practical business issues and the integration of cultural factors with the socio-political situation. A more systematic research on differences on various cultural dimensions would be beneficial.

This dissertation has some implications regarding the research approaches as well. The results show how deeply the cultural factors influence the way of doing successful service business in China. The combination of culture and business opens the door for further research in an interdisciplinary way. The results also indicate that the organizational culture manifests itself in differences between SOEs, POEs and FOEs. These three company types are not China-specific, but common throughout the world. The observations made about their behaviors are of general interest. However, these observations should be validated with further research.

In addition, the interrelationship of three value dimensions (provider value, customer value, and relationship value) identified in the dissertation are an important area for further research. Provider value includes the payback and branding. As regards Western service providers' entry to China and their positioning in the value chains, it would be interesting to deepen the understanding about similarities and differences of Chinese service market (e.g. KIBS) compared to Western countries. Customer value is linked to application of the user-based development models. It is important due to the huge and diverse service market in China. Relationship value is about trust, commitment and loyalty between providers and customers. Interestingly, this research reveals some interlinkages between the Chinese culture and the approach of service dominant logic (SDL), considering service as a relationship. It would be valuable to have further evidence of their relationships as well. The rich interview material of this research can be used as a basis for other case studies and for the planning of questionnaires in quantitative surveys.

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Appendix 1 A

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Wang, S. (2012). On Smart city. *Library and Information Service*, 56(2), 5-9. 作者:王世伟 说"智慧城市". 图书情报工作. 2012 年 第 56 卷 第 2 期.

Yu, C. & Gong, C. (2012). Development predicament and coping strategy of medium-sized and small cities and suburban new towns. Shanghai *Urban Management*, 1(9), 33-37. 作者：雨辰，龚常. 中小城市与郊区新城的发展困境和应对策略. 上海城市管理. 2012 年 第 1 卷 第 9 期.

Zhang, J. (2010). *Report on Creative industry development in China.* China Economic Press, Beijing. 作者：张京成. 中国创意产业发展报告 2013.中国经济出版社. 2013 年 3 月.

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Sciences), 13 (2), 81-83. 作者: 张书. 我国文化创意产业园区的发展现状及存在问题. 河海大学学报 (哲学社会科学版). 2011 年 第 13 卷 第 2 期

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Appendix 1 B

(Original governmental documentation in Chinese language used as research materials in the dissertation):

China National Statistics Bureau (2011), *China Statistical Yearbook 2011,* China Statistical Press. 中华人民共和国国家统计局, 中国统计年鉴 2011, 中国统计出版社. Available at: http://www.stats.gov.cn/tjsj/ndsj/2011/indexch.htm (Accessed December 2014).

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Services represent a large and growing share of the global economy, and the internationalization of services is increasingly important in the globalization process of production, distribution and innovation. Business activities between the West and the East are a crucial part of this process. China, as a huge emerging market, attracts more and more Western service providers. This dissertation examines specificities and new phenomena of business-to-business (B2B) services in China. It investigates the opportunities and challenges that Western service providers meet in this country, characterized by a mix of Confucian culture and centralized socio-political system.

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